

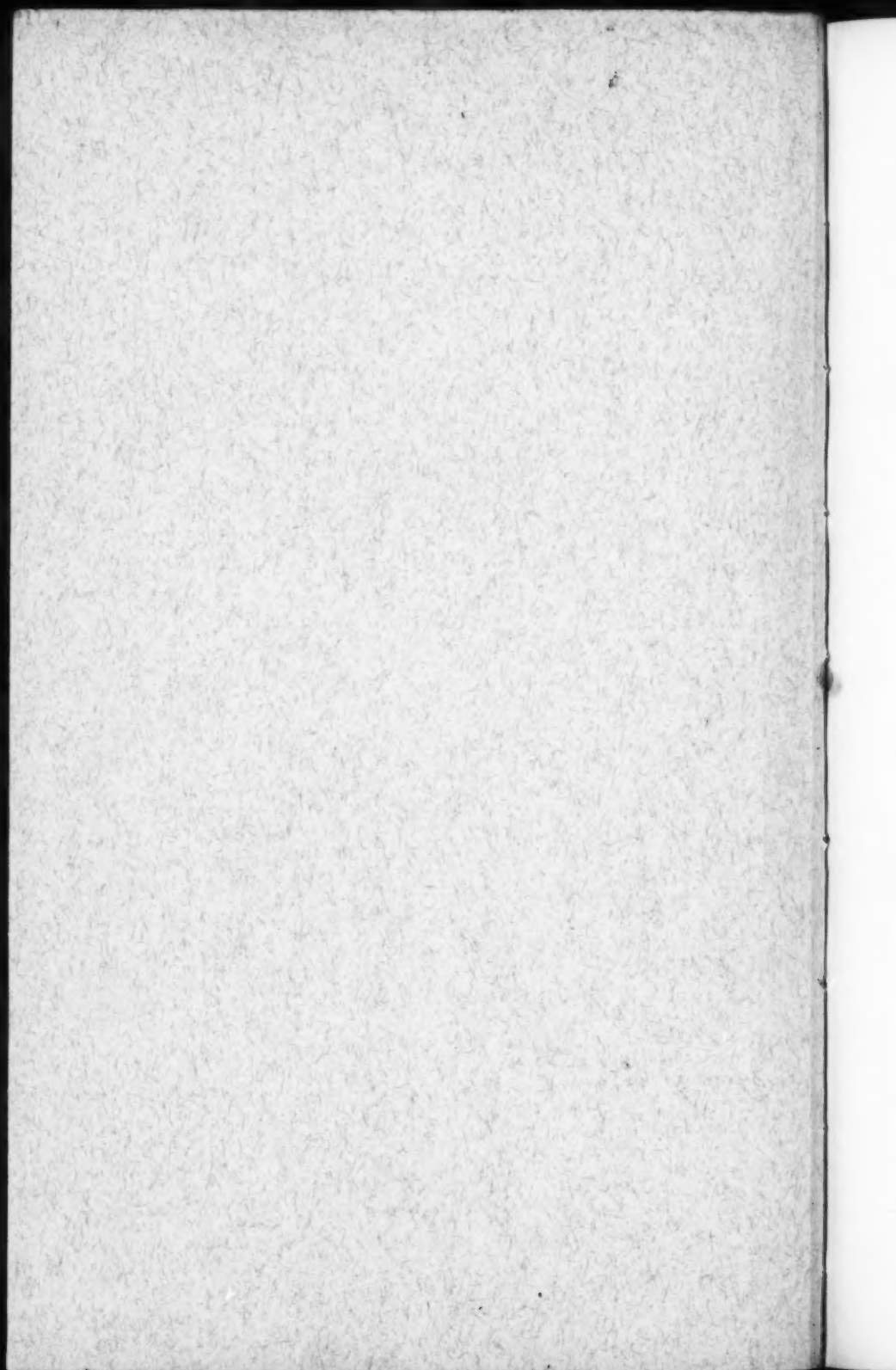
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SIERRA CLUB BULLETIN

October, 1944



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SIERRA CLUB BULLETIN

VOLUME 29

OCTOBER, 1944

NUMBER 5

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TWENTY-FIVE ILLUSTRATIONS

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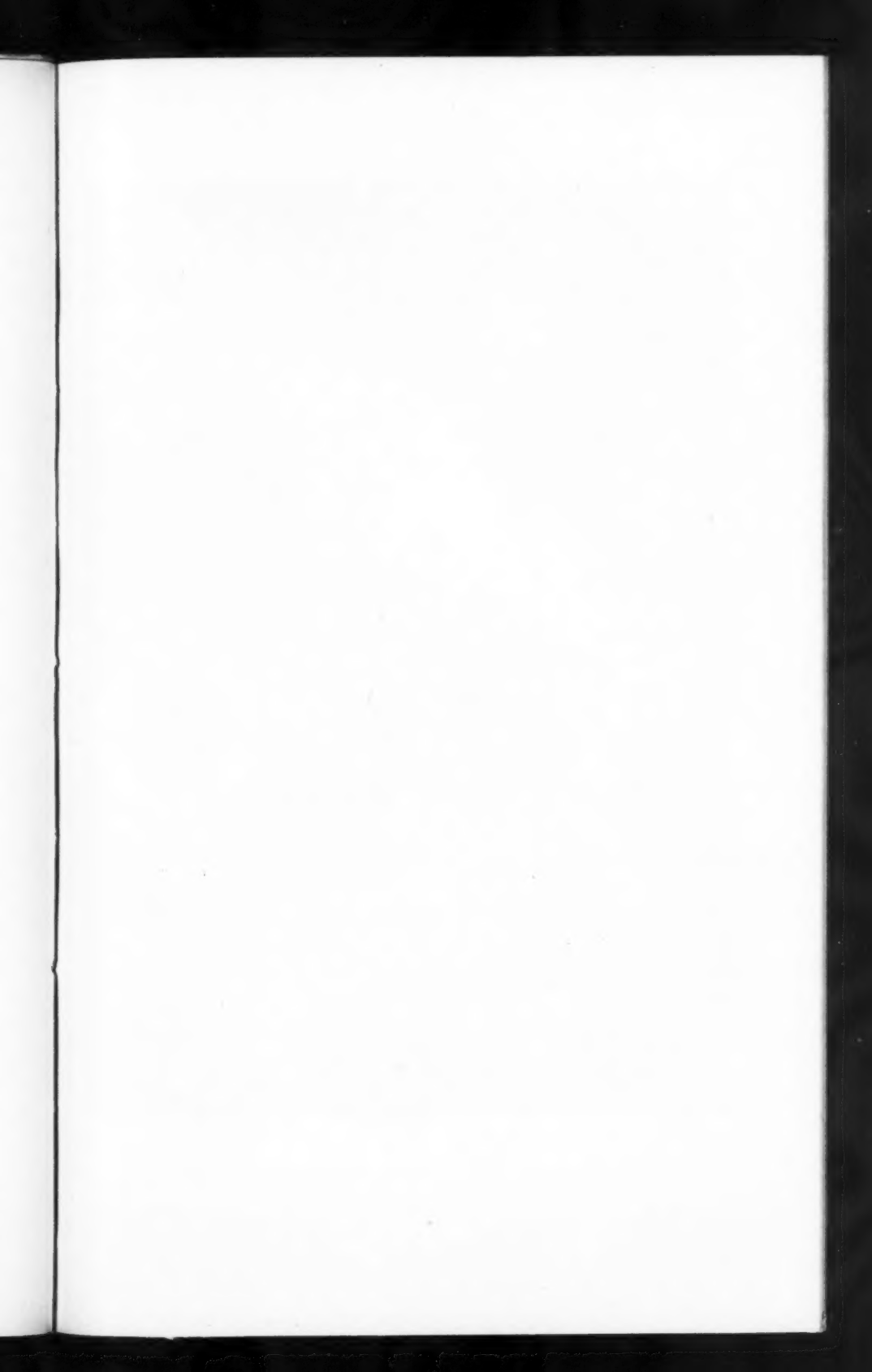
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SENTINEL ROCK By Joseph N. LeConte

SIERRA CLUB BULLETIN

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The Sierra Club Farther Afield

EDITED BY CHARLOTTE E. MAUK

THESE are our fellow Sierrans. The war or its related circumstances may have sent them far from familiar trails and old friends. But they have not changed. Through their letters, of which a representative few have come into our hands, we can glimpse new scenes and activities. Yet, running through all that they have written, we find the same humor and ingenuity and adaptability, the same appreciation and enjoyment of outdoor things, the same lively interest in people, that they share with other members of the Sierra Club.

By a Lieutenant in the Navy, from the South Pacific, October, 1943

—My conscience is now clear to the extent that I have climbed the highest peak of this island. Most of the way was along a ridge where a phone line had once been strung, which makes it a "trail." My companion and I allowed curiosity to get the better of our cautious instincts and lead us to descend by a different "trailless" ridge. We got into some steep cliffs, all the more dangerous because of the loose top soil and the treacherously insecure vines. We both reached the bottom safely and heaved a mighty sigh of relief, avowing that once was enough. We had no rope, but would have felt a great deal more comfortable if we had had one.

In some places the "trail" reminded me of the Santa Cruz Moun-

tains because of the luxuriant undergrowth. Censorship regulations prevent me from giving any more specific details, but suffice it to say that—as often is the case on “highest” peaks—the view was comprehensive and, for me, well worth the effort.

The officers I’ve met haven’t the slightest interest in climbing the peak. People do get up every once in a while, though; in fact, I met my companion en route, he having started alone for want of someone to go with.

It has fallen my lot, as safety officer of our particular outfit, to draw up a set of cautionary regulations about mountain climbing off duty. I drew upon my Sierra Club experience, tossed in some common sense adaptations to our local conditions, and the result has been approved by the commanding officer.

Besides my technical duties there are collateral duties. All officers have such things. They take more time than I thought they would, but a person here is fortunate indeed if he has enough responsibility to keep him absorbed a reasonable number of hours each day. Otherwise the monotony of this “paradise” surely gets on your nerves.

The “grub” is plentiful, and well served. But don’t ever mention spam to me again! The officers of this particular outfit have comfortably cool, relatively roomy houses; screen panels for walls, hot and cold running water, sanitary plumbing, electric lights, telephone, and a native boy to make the beds and clean up. From my bed I have only to raise my head a foot to have a sweeping view of the bay, framed by cocoanut and breadfruit trees; I can watch the shipping, see the ever-varying colors and textures of the water as breezes blow in from the sea. My particular house is farthest up the hill, so I have the dubious benefit of some sweat-producing exercise every time I walk “home.” The view is worth it, I always tell myself.

This afternoon I had the new and fascinating experience of exploring a lagoon bottom with a viewing glass. The skipper and I donned swimming trunks and old shoes, found a hand stick, snapped on the rubber mask with a glass disc (about four inches in diameter) in front, then waded out to water about a yard or two deep and floated on the tide, head submerged. We saw myriads of brilliantly colored fish of every shape, and sizes from that of a small piece of spaghetti up to startling monsters that out of water would barely stretch a two-foot measure. Velvety black devils, tiny bright blue

darts, fat blue and gold beauties, some striped with red and green glowing bands, yellow bellies, and squat puffers that could scarcely be distinguished from a mass of broken coral except when they moved. We picked up quite a number of small spiral shells of various sizes and shapes. They are coated with a purplish brown scale that makes them blend with the coral. After they've been removed from the water, the technique is to put them in a can with holes punched in the bottom and sides, and set the can outside for a few days. The ants eat up the sea creatures, but the rats can't get them. Then a soaking in clorox and a wire-brushing removes the outer crusting. Beneath are revealed the most beautiful shiny patterns of brown, red, blue, green, violet, in subtle shadings and patterns. Shell collecting is an interesting hobby—to be indulged in only when conditions are right, however; calm water, keeping well clear of the reef. There, powerful undertows have been known to suck down strong swimmers.

November, 1943—It seems more distant in time and space than a year ago that I was writing from Pinkham Notch, with the snow falling gently outside the cozy window, a warm fire blazing on the hearth, and the thrilling news coming by FM from atop Mt. Washington, that the Yanks had landed in Africa.

At our establishment here all cooking is by electricity or oil, and the only fires are bonfires during the day, burning the undergrowth that the natives have cleaned off the hillside around our fales. I sit in the office (which is well screened from mosquitoes) with my shirt off. From outside come the clanking sounds of cargo sheaves as ships across the bay unload their holds. Occasionally I hear the swishing roll of the low surf on the reef in the bay. Outside, the full moon rides high over the forested ridges of hills whose silhouette I cannot describe because of military restrictions.

I have no radio in my quarters, but the daily news mimeographs tell of the battle developments as our American boys and British comrades fight their tough way up the middle of the Italian peninsula, and bits of news accumulate about our new landings in the northern Solomons. . . A year has seen our forces forge ahead with powerful initiative in many areas. . . Our personal friends are more scattered than ever before; and perhaps we appreciate more than ever those friends that now we cannot see often.

January, 1944—Just before Christmas I had temporary duty on another island in this area. My orders were in connection with my technical specialty and involved going by steamship and returning by air. The sea voyage was pleasant indeed, not too long, with a friendly skipper (formerly of San Francisco) with whom I had much in common to talk about. However, unfavorable weather and seas prevented our entering the harbor when we expected to, and I was compelled to spend an extra night aboard the completely blacked out ship.

The town where we landed was an attractive looking community from the harbor, but I was rather disappointed in the dilapidated condition of many of the buildings when we got ashore. Later I was to take a ride out a number of miles from the village toward an installation where I had business. On this ride I enjoyed countryside as beautifully picturesque as any I've ever seen. Village after village of native fales, set irregularly yet with evident planning on a level or gently rolling greensward, kept carefully trimmed by the natives swinging at arm's length a curved hook mounted on the end of a wooden handle. Now and again an inlet from the sea would approach almost to the edge of the road and in its irregular rocky shelter would be many native women washing their clothes and themselves. Everywhere were brown scampering children, all the smaller ones quite naked, the larger ones wearing varicolored wrap-arounds from the waist down. The native fales are graceful structures, consisting of a cleverly fashioned curved roof of oval plan, thatched with palm leaves, and supported on a series of columns about one third the total height of the building. The floor is usually of carefully selected and washed white or gray gravel, elevated from several inches to several feet above the surrounding land. The higher floors have neatly laid walls around the edge and a screen of flowering plants about the outside.

We stopped in a couple of these fales. Our guide was the local Red Cross Field Director who knew many persons in the various villages. The girls had smooth youthful countenances illuminated by flashing smiles of white teeth, and friendly brown eyes; papa was a stolid local chief who betrayed no signs of understanding English—although I suspect he knew more about our conversation than he showed. The only way we could get the girls to go for a ride with us was to take papa along too. This would obviously overload

our small sedan. After much palaver, outside and inside the car, it was finally explained that we just couldn't manage, and we got away. LEWIS F. CLARK

By a Lieutenant Commander in the Navy (Medical Corps), from somewhere on the Pacific, January, 1944—Last Sunday a mixed dozen or so of the officers from the ship were lunch guests of some Naval officers. Then we were taken in jeeps to a native village to see and hear a program. It was held in a large thatch-roofed, gravel-floored meeting "hall," the natives seated on boards on one side, and we on grass mats on the other. All of the natives participated in the choral singing; and how immensely surprised I was to hear four-point harmony, syncopated accent, and even counterpoint! They were led by a director who very obviously knew each part and what effects he wanted. The melodies were entirely foreign to us (native, that is), and the intonations had that off-edge, plaintive quality we associate with oriental music. I deeply regretted that none of the natives had enough command of English to explain the history of the words and music.

There were also a couple of solo dances, by a man and a girl. These consisted largely of poses and arm gestures, with a minimum of foot movement—somewhat in the Javanese style, I believe. There were no musical instruments, the dancers being accompanied by the chorus. Four or five men, seated about a packing box, beat a rhythm on it with the flats of their hands, rising and falling in tempo and intensity somewhat in *bolero* fashion. It was a unique experience.

Before leaving the island I had a chance to hack the heart out of a recently fallen palm tree, thus to enjoy later a salad of "millionaire's celery" on my return to the ship. It's considerably overrated! CARL JENSEN

By a Private in the Army from the South Pacific, January, 1944—Well here I am alive and healthy. . . Holidays have come and gone and 1944 is now nearly a week old. New Year's crawled around a day earlier of course, and I was rather solemn in my celebration of it. Not much like last year. Summer is now fully underway (which means it rains only every third day now) and I'm acquiring a beautiful tan. . . Got quite a string of your mail today all the way from the 15th to the 4th. I didn't get the second Christmas box nor

any of the others yet. I expect I'll have Christmas in about April. . .

It seems queer to hear talk of snow; not only because I am down here but also because we never had it in California. Well that must be the "White Xmas I am dreaming of. . ."

In my younger years you used to comment that my hair "looked like a Fiji islander." Say no more, for having had a chance to examine the inhabitants of the Fijis I assure you there is no comparison.

Seriously, though, the Fijis are beautiful, almost living up to the South Sea legends. Suva, while not exactly San Francisco, was a town that offered some relief from Army life. As the islands are British, we had to drive on the left side, of course. Signs of "Chemists" and "Barristers & Solicitors" were plentiful. The struggle with pence and shillings wasn't so hard since American money was accepted anywhere. Fiji is very beautiful, and I'd like to visit it as a civilian.

The British, as usual, have an able colonial system and the islands have an efficient "well-scrubbed" air about them. Public health is excellent. The natives, nicknamed Bulas (also the native word for hello) are not handsome but are rather intelligent. Nearly every grass hut has a picture of Betty Grable and George VI! The Polynesians are a pathetic remnant of the fine race that once ruled the Pacific and gave rise to those stories of a handsome, intelligent people. The Bulas are very fond of the Americans and would line the road and wave at every truck that passed. . . All in all the Fijis are quite a place. . .

I have also seen a real volcano at last. It is of the "he man" type and should make Mount Lassen feel quite sick. . . [Here the censor clipped half a page.]

I received my first copy of the SWPAC edition of *Time* today and thank you for sending it. We get some news, but far from a complete picture, so I think it'll have wide circulation in the battery. It is the same as the regular issue except that it is stripped of all advertising and hence is much lighter. This was the copy for December 13th, so you see my news may be a little late but will never be stale. EDWARD C. SCOYEN

*By a Lieutenant (jg) in the Navy, from the South Pacific, May, 1944—*Yep, I can now consider myself a humanitarian or an in-

strument of Satan—somewhat in the category of the alchemist who first discovered dynamite!

First let me present the background. You probably have heard of the so-called beer shortage in the States due to the vast amount shipped to the armed forces (so the experts say). Well, although I have been informed that some of the bases and forces on the Hawaiian Islands, Fiji Islands, New Hebrides, Samoa, and Australia were rather fortunate, I can truthfully say that never a drop reaches the advanced bases or lines. As a matter of fact, we on board have been wistfully wishing for even a sniff, ever since leaving the States. Where its final destination is I do not know, but I have my suspicions, based on evidence which even Dick Leonard would consider substantial—supply ships arriving with beer on the bill of lading but with none of the beverage to be found in the space allotted to such cargo.

But I am proud of the great self control our fine sailors exhibit, even when they hear a member of the crew of an Australian ship exclaim, "I say, there, old chappie! Your American beer is not very good, is it? Can you tell me where to plant these crates of dead marines?" (He means cases of empty beer bottles) Gr-r-r-r-r-r! I now cease to wonder at the friction between our sailors and the Merchant Marine.

What happens when one cannot obtain something which he craves? He seeks a substitute. In this case it happens to be "Jungle Juice," made by the natives, who are as willing to produce it for the Allied forces as they had been for the Japs not so very long ago—only they find us more profitable.

The "Lone Ranger" now arrives on the scene, with his inexhaustible list of formulas backed by years of experience. The formula chosen for this occasion was "Biblical Mead," first concocted by the ancient Egyptians, and slightly altered by me during my collegiate days at University of California (and some people say an education is worthless!). After secret experimentation on board, I produced a first batch which was such a success that the skipper permitted me to carry on. So now every time we reach a new supply station I go forth with my sample to enlighten the Supply Officer as to the means and methods for the betterment of morale. Of course the crew on board is not permitted anything in the way of alcoholic beverages, but the men are all very happy

nevertheless, because for some reason or other ("Biblical Mead" must be pretty persuasive!) we now have beef steaks on our menu instead of the rather monotonous diet of pork chops and mutton.

What shall I name my beverage? It tastes much better than champagne, and although it has the kick of a mule—making your eyes roll in their sockets, hair stand on end, teeth fall out, and legs which may have been bowed all your life finally straighten out before you fall into a state of stupefaction—it at least is not so harmful as "Jungle Juice."

Later—The high humidity so prevailing in the tropics had already ruined more than nine tenths of the so-called waterproof watches many of the crew owned. Consequently, only one member of our party possessed a watch, which led to the common question: "McMurry, what's the time now?"—"Twenty-three thirty and still Dog Day," he whispered in a hardly audible voice.—Our plan of approach was much tougher than anticipated. Only seventy-five yards covered in the last hour and we faced another probable hour of tedious worming and crawling before reaching our destination on the small clearing in the dense, damp New Guinea jungle. The entire crew had volunteered for the task and I used discretion when choosing the eleven venturesome men who were to follow me without previous training or absolute plan of attack.—Bang!—ping—rat-a-tat-tat!—Our bodies "hit the dirt" in unison.—Gad, how I hated and resented clinging to the myriad of crawling decay and rot so characteristic of New Guinea soil. Darn sneaking Japs. Our chances of successfully completing the task have now been depleted to almost nil. I was scared. What right could I possibly have to take such swell boys on such a dangerous mission. Why, only a week ago proud McMurry was passing out cigars—Skinner, Deaner, and Kilgo continuously speaking and dreaming of the girls awaiting their return into the trap of happy matrimony—and of course Dilger forever longing to see his three young boys before they mature.—My fears were laughed upon and I was urged to lead on. What a gang!—"No noise now, we're almost there."—"Mr. Schneider," whispered the character from Brooklyn, "only one sentry guarding the dump. Why I could conk him like nothing." "No you dope—the pile of cases is large enough for us to crawl up from behind undetected—let's get it over with." Not a word was uttered, not

a sound made. Slowly each man made his way to the dump, removed a heavy case with the proper identification markings and then started on the short but laborious struggle back to the ship.

What a reception the boys gave us. They did everything but kiss us. The Captain looked as if he had lost ten pounds in his anxiety and said, "I should never have let you go—I must have been out of my mind. You crazy redhead if you ever dare suggest another similar expedition I'll throw you overboard!" To which I replied with my silly grin.

Two hours elapses and finds me nursing my precious bottle of beer.—Oh, it was wonderful! For twenty minutes I enjoyed a continuous cycle of sipping, looking, admiring, smelling; and when it was finally gone it left me with a tinge of homesickness.—But, we certainly put one over on the Australians for not giving us a few bottles. They had the presumptive nerve of considering themselves sole owners merely because the twenty-five cases were put into *their* provision dump for safekeeping. RUBEN SCHNEIDER

[The above episode took place in Eitape. Ruben is on an LST and has been right up in the front lines since the battle for the Marshalls in which he took an active part.]

By a Red Cross Recreation Worker, from Australia, November, 1943—Having just skimmed through four wonderful issues of the *Yodeler* (sent to me by a friend at home and to be forwarded to another Sierran in Africa), I take my towel under hand to write to my Sierra Club friends. The towel is necessary to keep the rivulets of perspiration from blurring my writing.

After spending five months in one of the coldest parts of Australia, I now find myself in one of the hottest—and in one week's time! In the south, we lived in a town and had most of the comforts of civilization. I even had a bicycle, which I rode a lot. Near by were large sheep stations—ten thousand acres is an average ranch in this country—a couple of which I visited.

There in the south, it was wonderful to see spring come, after a winter of hail, biting cold winds and some snow—a spring memorable for the glorious dazzling golden wattles. When first I heard of them I said, "Oh, yes, acacias; we have those at home." How wrong I was! Nothing can possibly compare with the intensity of color or density of bloom of this native tree. Later I walked (*not*

"hiked") through some so-called mountains, and from there sent home quite a collection of spring flowers, a small orchid among them. And that was in September!

Living here in the bush is entirely different. I love this outdoor life despite the muggy heat. But we have to take salt tablets at every meal, and we take vitamin pills as well. I'm with the Air Corps, and a few days ago some one flew in with a few cokes. What a furor that caused! As for me, I got only a look at two empty bottles.

Everything here is quite informal. We live in pyramidal tents with concrete floors, wear khaki shirts, culottes or slacks (the latter at night for protection from mosquitoes), GI field shoes and socks, and have acquired the characteristic gesture of every one stationed here—a continual swatting motion to keep off the devilishly persistent flies, flying ants, and other insects. We go to sleep—under a mosquito net only—to the sound of termites chewing the bamboo fence around our tent.

My job as a field recreation worker for the American Red Cross is the most varied possible—always interesting, always full of human tragedy and comedy.

The country here affords a good deal of recreation; we have pet wallabies and parrots, occasionally eat wild duck or turkey, ride horseback, visit old mines and ranches near by, go swimming in beautiful tropical pools (but beware of crocodiles and of fungus growth in your ears!). The men have used bamboo quite decoratively in the construction of their club—"The Kangaroom"—and around their tents. The most popular and closely guarded spots are the watermelon patches scattered over camp. I seem to be one of the select few who relish mangoes, and I quite often seek a spot where I can sit down and drip juice without damage.

I have with me four photographs taken on a memorable burro trip in 1941—all of snow. You can't imagine how cool they look to me here: slick wet rocks, sparkling snow, and the feeling of height given by the peaks. Keep that wonderful Sierra Club going as it is so we can some day be back together in the life we love.

DELEE STAUNTON

By a Sergeant in the WAC, from Kandy, Ceylon, May, 1944—The SEAC Headquarters are now in Ceylon. Our trip here, through

the interior of India, was a wonderful experience. This place is quite different from India (but, I might add, in a rather nice way: it is cleaner and more healthful). We are located in the mountainous part of the island, and I am in my glory. If I can get some time off to do some hiking, I'll be satisfied to spend the duration of my overseas term of service in this very spot.

Ceylon is a tropical island in every sense of the word. It has everything from pineapples, cocoanuts, rubber, tea, and spices to insects of every description and (they say) snakes. If I ever see any of the latter, I'm afraid I shall lose considerable enthusiasm about the place. As it is, I think it is one of the most beautiful spots I've seen in all my travels thus far. There are trees and flowers of every description, including about a dozen varieties of orchids. We have seen the trees that produce cloves, cinnamon, nutmeg, bay leaf, etc.; and, of course, the island is covered with tea plantations.

Ceylon has two monsoon seasons, the current one beginning the middle of April. As yet the rain has been mostly at sundown, but the showers come a little earlier each day, so before long the monsoon will be here in all its fury. So far the rain has been a welcome relief at the end of the day to cool things off.

I have had one pass since I came here—to "the city," Colombo. It is located on the ocean with a rocky beach like Laguna. We had lunch at a hotel overlooking the ocean, and for a minute we could imagine ourselves back in Southern California. But that doesn't last long. You look around and see the native waiters (men), some with long hair done up in a bun and a fancy comb perched on top, which indicates that they are of a class that will never carry anything on their heads.

There is a very nice Red Cross in Colombo. Several of the girls there came over from the States when we did, and it was like seeing someone from home to meet them. One was making cookies, and brought out a whole plate full. Needless to say, we made short work of them, and they were delicious. The Club, called "Cross Roads," was filled with sailors. They took us all over the town and to our train.

We are living with the British WRENS, but we eat with the American men. It is wonderful to eat American food again, cooked by Americans. No more tea and kidneys three times a day!

IRENE KELLY

By a Sergeant in the WAC, from India—It is as much of a surprise to us as to most of our friends to find ourselves here in India, twelve thousand miles from home.

Our crossing was almost like a vacation cruise. We had the best accommodations and the captain gave us every privilege that he could under the circumstances. We had some of the best swimming I've ever enjoyed, passes at all the ports of call, Christmas and Thanksgiving dinner parties, birthday dinners, an orchestra, a ship's newspaper, etc. It was really a shock to have to go to work after so many weeks of sunning and growing lazy. It seemed like leaving the last bit of civilization behind when I left the ship and found myself in India. The first sight of it isn't too good, and I think we were all a little scared.

We live with the British WRENS, and all our barracks, recreational hall, reading rooms, tailor, etc., are connected by a long covered corridor. It reminds me of a railroad station. White women are greatly respected over here, and it is certainly a break not to have to make our beds, shine our shoes, send out our laundry, or even put our bicycles away. We have a bearer for ten of us, and for the sum of about \$2.50 a month each he takes care of everything. In Indian terms he is "very well off." He is practically indispensable.

There are any number of things to do. In town there are several nice dancing and dining places that are almost like those at home. Then there are "the cinema," cycling, picnicking, shopping, sight-seeing, etc.

We've started taking Hindustani classes. The Indians almost drive you to distraction unless you know how to handle them. We've picked up a lot of the language, but not enough to get the best of them yet. One thing that is general and nerve-wracking is their conventional "Yes, please"—always their answer even if they haven't the vaguest idea what you're talking about. The bootmaker, the tailor, and the photographer all promise to get a thing done, but never have it on time. You can't do anything about it because they just look wistful and say "Yes, please."

We spent a week end at Agra, site of the Taj Mahal, as guests of the Army. It was a wearing and tearing week end since most of the fellows there hadn't seen an American woman in two years. We visited the Taj Sunday afternoon and it is every bit as magnificent as pictures had lead us to believe. The gardens and pools around it

reminded us of places in Pasadena, but the main structure is like nothing I've ever seen at home.

We have taken up cycling, both as a means of getting places and as exercise. It's a real art to wind in and about the teeming millions on the street, walking, cycling, herding goats, driving bullock carts. We almost killed a couple of people before we learned to use the brakes on the handle bars. It is not unlike skiing—dodging trees and not knowing how to stop.

We had a forerunner of the monsoon early this morning and it was wicked. Last night it was so very hot that it is not surprising that it rained. Now, today, we're wondering just what we can do on our afternoon off. We had planned a turn in the country on our bikes, but it appears a little soggy. It would be a wonderful day for lying in front of a fireplace with popcorn and apples, but we haven't the apples—or the popcorn—or the fireplace.

BETTY LOU MEEKER

By the wife of a construction engineer, from Whittier, Alaska, October, 1943—Much has happened in the last few months, and I'm an Alaskan now (for a while, at least). Bob and I have been very lucky—we've been together, actually living in a house, ever since I got here in the middle of June. I am working in the West Construction Company office, in the same building as Bob.

This place is very wet. We are at the head of a long inlet—like a fjord—and there are mountains and glaciers on three sides. When I got here, it was summer—and summer lasted all of three weeks. We had a lot of fun trying to identify all the plants in bloom. Timberline here is about 400 feet elevation, and many of the alpine things were old friends: heather, gentians, violets, etc. There is a species of dogwood that grows four to eight inches high and bears a single flower head—a fine miniature little affair. We found a polemonium, also a single flower, but the same lovely blue that we knew already.

We've had two trips to town—Anchorage. I get a kick out of the train we ride in. The Alaska Railroad has probably the most amazing collection of old cars in the world. It is very indifferent about schedules, and, as my boss says, "they've been all mixed up ever since they got that other engine!" But it is fun.

The cottonwoods and birches are all yellow now, and are lovely

against the dark green spruces. We always look for a moose when we get through the tunnel into Bear Valley. Some are seen every once in a while—so far, though, none by the Craigs.

Life is simple here, but we have all the conveniences of civilization. Far different now from what it was when Bob first came two and a half years ago and landed on the beach from a small boat and helped put up tents! We have our lunches at the mess hall, but otherwise we cook and keep house for ourselves. Our cabin is one of a row of five on the beach.

There are two other couples besides us. We all work for West or for the USED. For a long time my neighbor, Minnie, was the only woman in Whittier, but now there are a dozen or so of us, and more coming in from time to time. For a long time women weren't allowed here, but all barriers are broken down now that they are needed for the offices. The men who were here at the start shake their heads—the place is getting too civilized!

We've managed a few walks, but that is all. Seven work days a week and foul weather—and I mean foul!—don't leave many opportunities. It hasn't got cold yet, but the snow is down as far as the thousand-foot level all around us. It just rains here. It's fun to try to predict weather changes, which are few, but hope springs eternal! The barometer is little help; things change so fast that the barometer is usually behind. We never know whether the "low" it shows is yesterday's storm, or one we're having right now, or the one that's coming tomorrow.

By now, I suppose, the Harvest Camp work is being wound up. I still wish I could have helped out. I bought a bunch of grapes for sixty-five cents in Anchorage, and ate them one by one—and thought of all the sunny vineyards in the Napa Valley.

Yours for some sun! MARION (ROACH) CRAIG

By a Captain in a Medical Detachment with the Mountain Troops, from Camp Carson, Colorado, February, 1944—As you probably know by now, I was on that JANFU (See Time, August 28) which invaded Kiska to find the little man who wasn't there. And it was a good thing the little men were not there, as lots of us would not have come back otherwise. The Japanese had prepared their defenses well, could have swept our approaches, and bombing had not touched them at all. It wouldn't have been as bad as Tarawa,

but still wouldn't have been comfortable.

There is one sensation I will never forget, and that is the peculiar squeamish feeling one gets in the pit of his stomach as he is sitting in one of the landing barges waiting to make the approach run onto the island. You feel just like a duck in a shooting gallery and just wait for the shots. You see, we didn't know for four days that the Japs had left the island, and so were prepared psychologically for everything. We were bitterly disappointed that we didn't get a crack at them, but knew at the same time that it saved many boys' lives.

I don't believe that our air force drove the Japs out of Kiska. Their structures above ground were fairly well destroyed, especially by the strafing, but their underground emplacements and caves were intact. I think they withdrew because they were outflanked with Attu and Amchitka occupied, and didn't want to sacrifice the lives of 10,000 of their men, strange as that may seem.

The Japs left all their equipment and all their personal belongings except rifles, helmets, and geisha girls. It was very interesting to go through their living quarters, caves, and dugouts, to see how they lived and to look at their equipment. Their barracks were constructed with very low doorways, and we were always striking our heads against the lintels. Down the center of the room was a corridor, with platforms built up about sixteen inches on each side. The men evidently slept directly on these platforms, using blankets (no sleeping bags) and no mattresses. We saw no cots or bedsteads. Their clothing was well made and warm, and there were some fur lined coats, caps, and gloves.

They had left their machine guns, AA guns and coastal defense guns in place. In some they had removed parts, but others were in good condition. There was an abundance of ammunition, especially mortar and howitzer shells.

There were land mines around some of the main beaches, and booby traps in some of the caves and gun positions, but not nearly so many as one would expect. I imagine they left rather hurriedly. There were some casualties among our men from these mines and traps.

What I saw of the medical equipment was very good. They went in strongly for vitamins, and had large quantities of tablets and ampules of vitamins B and C. There also were large ampules of saline and glucose.

They had plenty of food to leave behind, but had sabotaged most of the canned goods by punching holes in the cans. They were strange and unusual foods, although we recognized cherries and plums. Their rice was only partly polished and we had several good meals of it before it became moldy.

The Japs had really taken a beating around Kiska in their shipping. There were four large freighters on the beaches, bombed, strafed and burned. There was another ship at the bottom of the harbor with only the masts showing above the water. In calm weather barges could be seen, sunk in the harbor, and it is said that there is a large submarine sunk there. In one place in the harbor there is a continuous oil slick, evidently from the leaking tanks of some sunken craft.

The Aleutian Islands are absolutely destitute of trees. The only woody vegetation is a willow growing about six to ten inches high. Mostly the hills and mountains are rolling, much like California hills without trees, covered with a ground matting of crowberry, cranberry, moss, and grass. Under this matting is a fine black soil constantly wet, so that as soon as the covering is broken, a very slick mud is beaten up. Consequently, wherever any vehicles go the terrain is a mud hole.

The island is beautiful on calm, clear days—but we had only about seven or eight such days in the four months we were on the island. Usually the wind is blowing one way or another, mostly from the cold Bering Sea side to the warmer Pacific. About every two weeks we would have a real wind storm with hurricane velocities of sixty to ninety miles an hour. A good many of the tents would blow down during such episodes; even our lieutenant-colonel's tent came down twice and he miserably dragged himself out of the ruins at 2 a. m. to seek shelter elsewhere.

I haven't mentioned rain, but that phenomenon is just a part of the island. For days it would rain and the accompanying wind would drive the water through everything. Then the rain would stop for a few days, and just when you began to take hope that possibly you and your equipment and the mud would dry out, back would come the rain.

The fauna of the island was interesting. In the autumn there was a fairly good run of salmon, and the men caught quite a few. There were also trout in the lakes, and cod and halibut in the ocean. There

are many blue foxes on the island, and they soon became quite tame. Outside one of the tents a fox was tied up, just like a dog, and inquiry as to why it was tied brought the answer, "To keep it *out* of the tent!" We also had rats, which the Japanese had introduced, but these and the foxes, and a few dogs left behind, were the only quadrupeds.

Among the birds, however, there was more variety. The large black raven hovered near our camps most of the time. Before winter set in we saw many specimens of our national emblem, the bald eagle. There was a flock of twenty-one, one day, catching salmon during a run. The golden plover visited us before taking off for the southern sea, and the Aleutian sandpiper was abundant. Cute little winter wrens fluttered and hopped around the rocks by the shore. Snow buntings were found in the fields along with many species of sparrows. Once in a while we saw a black gyrfalcon floating by the cliffs of the shore.

When we first arrived (August 15) there were still some flowers in bloom. The beautiful dark purple iris was abundant by the streams, and along the banks one could sometimes see a rose-purple azalea. The larkspur and monkshood were grand.

Even with these interesting flora and fauna, life on the island soon began to be boring. There was nothing to do except take walks, and the weather usually discouraged that. The eternal wind, fog, and rain, the lack of communication with the outside world (mail took two to four weeks to arrive), and the monotony of living, all combined to make us look eagerly forward to our departure.

Every day we would go look at the harbor to see if "our ship had come in." Finally it did, and we left around the first part of December. My particular group was the most fortunate of all. We had an Alaska Steamship Line vessel with all the comforts of a pleasure cruise. It was like a dream to step off the island—dirty, cold, muddy—onto a vessel, have a private stateroom (with steward), and go down to the dining salon where a waiter in a white jacket served at a table with white linen and a printed menu. That cruise back was almost unbelievable—steak for breakfast, all sorts of side dishes which one finds only on a cruise, a plentiful supply of roasts, chops, etc. It was just like the cartoons "This is *not* the Army." Even my men had the same benefits, although their staterooms were a little more crowded and did not come complete with steward.

There was a real, honest-to-goodness nurse on board, and you should have seen the heads go 'round that first night as she entered the dining salon, all spotless in nice crisp uniform. The first female in five months!

We finally got back to the States and to Camp Carson, and then were all granted twenty-day leaves and furloughs. Here I am now back in Colorado at Camp Carson, where we are reorganizing and retraining H. STEWART KIMBALL

[Dr. Kimball has since gone to another part of the world—to Normandy, and beyond, in France.]

By a Bacteriologist in the Public Health Service, from Alaska, January, 1944—Here is Alaska, Beautiful Alaska! Juneau itself is like something out of a dream. I recognized it immediately this morning as I looked out the porthole just after breakfast. I ran up on deck, and took a good breath-taking look. The mountains rise sheer and steep from the water, and now they are all snow-capped, with trees almost to the summit of most of them. Juneau just sits on the hillside, apparently on the only part of it not too steep for building.

Juneau itself is surprisingly modern and surprisingly warm (the skiers are complaining that the heat is ruining the snow). Today it is scarcely colder than San Francisco was when I left, and certainly warmer than Seattle at any time I was there. The shops are small and very modern, the streets paved, and the sidewalks concrete. Everything is much more cosmopolitan than in any town of similar size in the States.

Later, from Ketchikan—Now here is Ketchikan and the rain I've heard so much about. Up the hill, though, I can see snow-covered trees. The trip from Juneau to Ketchikan was beautiful, with the sea smooth as glass and the ship passing between high snow-covered peaks. Several schools of porpoises passed us, their white sides flashing as they jumped along beside the ship, and the spray they kicked up showing in all directions. I watched and watched in hopes of seeing a whale, but no luck.

Yesterday I spent in looking over the laboratory and checking supplies. It is new and clean; the laboratory is mine to run and I find myself in the position of executive officer and janitor at the

same time, not to mention secretary, dishwasher, and general flunky! It should be fun.

March, 1944—One weekend a group of about forty assorted girls were taken on a USO party to an Army camp near here. We left by boat (the principal means of transportation here), had a bit of a rough trip over, and were met by Army cars at the dock in a pouring rain.

First they fed us, then after a short period of relaxation and a chance to powder our noses we were escorted to the gymnasium. It was beautifully decorated; the boys must have worked hours if not days on it, and showed that they appreciated our coming. The dance ended about 1:00 a. m. and we were escorted to our quarters. The recreation hall had been turned into a barracks for us with Army cots arranged in prescribed GI formation.

When we were awakened in the morning, we were taken to breakfast, then to church. My memory of the rest of the day is hazy. We seem to have spent our time getting in and out of one type of Army vehicle after another and being taken some place else to eat. I rode to Sunday dinner in a command car. After lunch one of the boys tried to get me a jeep, but failing in that, got me a ton-and-a-half truck. Next came a movie. Following that we drove some more, visited the hospital and autographed a cast, and were taken back to the boats (me still in my ton-and-a-half truck!) and started home.

The next night I had counted on getting to bed early, but late that afternoon I received a plea to chaperon a group of eighth graders who wanted to go to a basketball game over on another island about an hour and a half from here (by boat—you really have to be amphibian to live up here). They couldn't go unless someone could be found to accompany them. It was my first experience as a chaperone, and I hadn't the faintest idea of what was expected of me, so I let them pretty much alone. So long as they didn't kill each other or fall in the bay, "Bring 'em Back Alive" was my motto. The trip home was lovely; as the moon set the stars shone as brightly as on the desert, and I was treated to my first display of the Northern Lights, this time a lovely violet glow outlining the hills. The children were certainly self-sufficient. Two of the boys were allowed to steer most of the way, and they really knew their stuff; when it was time to tie up or cast off they knew just

what had to be done. It was quite an experience being kept out until one in the morning by the eighth grade!

April, 1944—The two Johnnies—Dyer and Dassow—took me on my first rainy day hike on a recent Sunday, and also for my first bushwhacking up here. We had planned to go skiing, but when we were ready to start there was a torrential downpour, so we arranged to hike instead. We followed the usual trail leading up Deer Mountain and then turned off to Scout Lake on what had once been a plank trail, but which was now mostly muskeg. From the lake on we were on our own, and I learned that we don't even know what bushwhacking means down in California. This trip makes a jaunt up or down Swede George Gulch look like a picnic for elderly ladies. For a while we would travel on muskeg, with its soft springiness underfoot, then fight our way through willow thickets heavy with devil's club. Streams had to be forded or else crossed on slippery mossy logs. Then we would scramble up steep hillsides and slide back down, using branches in the absence of a good belay. Over logs, under logs, across logs, through streams, over streams, up streams, on the snow, in the mud, hopping talus—such was our route.

It was hard to tell whether there was more water overhead or underfoot. Really, the weather was so wet, the ground was so wet, there was so much water in the streams, and we were so thoroughly saturated, that I became completely oblivious to the rain, which continued to fall in steady torrents all day. I fell in the stream twice and thoroughly christened my new pacs, filling them to the tops with ice water. The first time, I stopped and emptied them; but later I gave it up as a hopeless task and spent the rest of the day with water sloshing around between my toes and running from heel to toe and back again as I walked. I did manage to warm it up somewhat by keeping moving. Not content with filling my shoes with water, I also sank in muskeg up to my knees.

There was one stream crossing that I shall never forget. Having worked up my nerve sufficiently to cross on a certain high suspended tree trunk, I was quite dismayed on reaching the other side to find that I was not only on this tree, but also up a tree some ten feet from the ground! The first tree in falling had lodged itself in the second across the stream.

As you may gather, this is really rugged country, although the region we visited is just outside town.

We finally climbed up to a lake under a steep granite cliff and from there on up a lovely waterfall cascading off the granite shoulder of the mountain. At lunch we stopped at what was a comparatively dry spot. During the few minutes we sat there huddled under my poncho there was a particularly heavy downpour and we soon found ourselves sitting in a newly forming waterfall.

Reaching home completely drenched, I spread newspapers on the kitchen floor, shed my wet clothes, wrung them out, emptied my boots, and most fell into a tub of steaming hot water, the best part of the trip. Later we gathered at the Dassows for a steak dinner and a record-concert of Beethoven, Mozart, and Shostakovitch.

DIXIE WOODBURN

By a (then) Private (First Class) in the Mountain Troops, from Camp Hale, Colorado, February, 1943—We returned yesterday from a nine-day maneuver, which was a very interesting thing. It was a good start at winter camping for the men. Charley Hanks and I were technical advisors, whose jobs were to tell the officers which slopes were dangerous and which safe for travel, and to act as guides on peaks or ridges. We also recovered the supply parachutes which landed on cliffs by mistake. So, you see, the Sierra Club scores again. Now we are to send reports on equipment, etc., to Washington.

Charley and I had a lot of fun because we were quite independent. We climbed Homestake Peak, 13,200 feet, several times, and got our first real view of what Colorado has to offer in the way of mountains. Some distant ranges looked fine.

Main features of the trip were wind and cold. Night temperatures ran down to 16° below, and it was never warm. At times, near the ridges, Charley and I could not see each other, only fifty feet apart, because of storm and snow.

Best show of the trip was the avalanche started by 75's. Hanks and I were glad to see the snow come down because it proved our warnings were not foolish. It was a big slide, too! The snow hit a frozen lake at the bottom of the cliffs with such force that thousands of tons of ice were thrown up on the banks. MILTON HILDEBRAND

By a Private in the Mountain Troops, from Camp Hale, Colorado, January 6, 1944—Two of the highest peaks in the United States were climbed between Christmas and New Years by men from the 10th Reconnaissance Troop and the Mountain Training Group. Mount Elbert, 14,431 feet high and Mount Massive 14,418 were the objectives of 68 officers and men on a three-day ski trip. The men left trucks December 28 at Herrington Creek at an elevation of 9500 feet, a few miles from Leadville. Traveling on skis or snowshoes the party made an impressively long line. After lunch packs were left at the junction of the Main Range Trail and Herrington Creek. Mount Elbert is a gigantic pyramid-shaped mountain. The snow was not deep enough or packed well enough for really good skiing. The upper slopes were wind blown and the men left their skis to walk the last portion of the ascent. Twenty-one of the men reached the highest point in the middle of the afternoon. The day was clear and there was a magnificent panorama of snow covered peaks in all directions. The descent on skis with eight inches of dry powder snow over a hard base of logs was more than enough to test the skill of the most experienced of the ski instructors. Camp was made at the packs shortly before dark.

The second day the men left camp at 10 A. M. and skied north about 8 miles along the Main Range Trail stopping for lunch at Half Moon Creek and camping at Willow Creek. Tents were carried, but many preferred to build their own shelters. This camp at 11,000 feet in heavy timber was a very attractive place to bivouac. Some of the men made use of ruins of old log cabins.

The third day the party started about 8:30 A. M. for Massive. As the name suggests it is a bulky mountain with subsidiary peaks to the northwest and southeast each with elevations over 14,000 feet. A numbing cold wind blew directly toward the climbers and all available clothing including face masks was used. On the upper wind-swept slopes skis were left behind and traveling in three columns the men reached the crest south of the summit. A narrow, rocky ridge had to be traversed to reach the highest point of Mount Massive. Thirty men were successful in reaching the highest point in spite of the cold wind. The ski instructors from the two Camp Hale units climbed the two highest peaks in Colorado and the second and third highest peaks in the United States. The ascents of these mountains have been made frequently in the summer but

very seldom in the winter. Probably this was the largest party to make the ascents in winter.

The return from Mount Massive was made down the west slope and after a short halt at the bivouac area the entire party went down Willow Creek to meet the trucks at the base of the Massive Trail. Camp Hale was reached before five in the afternoon.

Captain Luther was in charge of the trip and Lt. R. M. McJury was the leader of the climbing parties. GLEN DAWSON

By a Captain in the Quartermaster Corps, from southwestern United States, July, 1943—Our jeep trip on the desert was as much fun as any RCS trip, and yet valuable from a military standpoint. We traveled in regular combat style, no top or windshield, bedding rolls slung around and lots of water (really just enough to drink—no washing—2½ gallons per man per day). We were dressed in coveralls and helmets, so we weren't worried about the dust or our beauty.

Our small group was quite alone after the troops moved out. We camped on the desert. The stars were beautiful. The temperature dropped to 76° at 6:30 a. m., even lower a little earlier, so that blankets felt very welcome. Soon, though, it was over 80° again, and we knew it was time to get up.

After some necessary interviews in a nearby town, we got a soda and then headed up through some wild mountains and desert on the east side of the Colorado River. Roads were just trails, and almost exactly like those into Monument Valley. We drove for many miles toward the base of a massive range capped by a nice tough-looking summit towering up at 45° to 75° on all sides. We followed up a stream-bed until cliffs were on all sides of us. And there we camped for the night in a spot very much like the Death Valley canyons.

It was beautiful. Nice desert smells. Millions of stars. I lay on top of my blankets, with a very comfortable breeze at 98° playing lightly across the skin. Absolute silence except for the cooing of the desert dove.

Next morning we saw a sign pointing to "Horse Tanks." We decided to see what they were like. We drove up a wild and narrow little stream-bed and came to the "tanks." In this country a "tank" is a natural pothole in a rocky stream-bed where the water, coming over a waterfall, digs a deep hole that will hold quite a bit of water

that evaporates slowly and is used by grateful birds and animals in between the rare storms. The scene was very much like the beautiful Darwin Falls of Death Valley.

As we came up, a magnificent band of desert mountain sheep left the water in an orderly and dignified manner. They were so calm and unafraid that they stayed within seventy-five feet of us. It was a beautiful picture, with brilliant colors—reds, yellows, black—in the rocks and these sheep stepping so gracefully up the cliffs. Two deer followed, almost clumsy in comparison. There were fourteen sheep in the band.

There should be marvelous rock climbing a few miles across the desert. The S H Mountains rise at terrific angles 4,000 to 5,000 feet out of the flat desert, with dozens of spires 60° to 85° for one hundred to several hundred feet in height, many of them major summits. It is wonderful country. DICK LEONARD

By a Sergeant in the Mountain Troops, from West Virginia, April, 1944—I've found West Virginia weather tolerable for the first time in four months. It has rained or snowed continuously for the last week, and I have been between clean sheets in a warm ward battling measles. I can honestly say that it has been the best week I've had in the Army. Three times a day a boy in a white coat comes around with a jigger of moonshine and a chaser and says, "Here's your cough medicine, sergeant." I toss the stuff down, make a mad stab at the chaser, and gasp, "That'll be all for now, son." He usually leaves before I get a chance to pay.

The Red Cross is very active in this region, and I think they've got a chapter started in some girls' college hereabouts. Almost every day a few girls come through the hospital with baskets of cookies, looking for worthy cases and husbands. Whatever their motives, it is good to see them, and the cookies are welcome, even if half of them are burned slightly. One comely lass, seeing that I was bored, asked me if I'd like something to read. "Oh, yes!" I roared, not wishing to seem over anxious. We batted the breeze for a while, then she turned to go. "By the way," she said, "who is your favorite author?" I told her that next to Sigmund Freud I liked Horatio Alger best. The next day she returned with "Tom Swift and his Giant Airship," and I knew that I was in the presence of the founder of all Army libraries. ART ARGIEWICZ

By a Corporal (later a Staff Sergeant) in the Army Quartermaster Corps, from England, August, 1943—England is grand! The hundreds of tiny towns are very quaint with their winding streets, stone houses, old churches, and funny little trains that speed on the level and falter on the easiest hill. We've seen the ruins of ancient churches and castles; in fact, we're living on the grounds of an old castle which is still in good shape. Though I can hardly judge yet, it seems that we have an ideal setup here.

Last night a friend and I were out with two English young ladies who showed us a bit of our interesting environment. We found a very nice pub which was new enough to resemble a night club—somewhat. Most pubs are old fashioned, but they have a sort of homey feeling, since they are considered the families' and neighbors' meeting place. People chum around and drink bitters by the hour.

Have you ever indulged in "fish and chips?" One night we ventured into the Fish and Chips Saloon and stood at first with the rest of the crowd, which was six deep around the counter. By going to the service men's entrance at the back door, though, we got waited on in only a half hour. We took our package to a park and consumed happily. The "chips" are nothing but french fries. The fish is cooked in deep fat and comes out with a sort of browned shell around it. The whole business tastes very good.

I have a bike now. If I can get some time off, it will repay me in pleasure far more than its cost.

September, 1943—I spent a most pleasant Sunday afternoon. I toured through the country and visited several villages on my bicycle, and it is really every bit as enjoyable as I had expected—and then some. The country is beautiful, the people are friendly, the towns are quaint and interesting, and the hills not worth worrying about. Another afternoon we walked to the nearest village and saw a famous old church and some ancient ruins. I wish I could have taken photographs of the church and school and some of the grounds and countryside. The green meadows divided up by hedges and spotted with sheep and cows and old brick houses are very pretty and very English. Frequently a pony-cart goes trotting by and the driver nods cheerily. Some country!

One night we headed for an outlying part of town where we met the civilian who works for me. We went to a nice, homey pub with

him and two other men of our outfit and proceeded to sing and drink bitters. There were no other soldiers and all the people were friendly and all seemed to know each other—like a block club meeting. The older women had the younger organize a “hoky-coky” dance for us, and we felt about as silly as one generally does at the beginning of a Virginia reel. From time to time some one would get up by the piano and sing a solo, such as “Yorkshire Pudding.” When the place closed, one very nice gentleman asked the four of us over to his house, and there we had more beer and sang some more and told about New York, Hollywood, and San Francisco, and in turn learned about his town.

I took my choir to the village church, and was almost a nervous wreck by the time I got them there. Never have I seen a group of men so hard to get moving. We rehearsed on the truck on the way down and it sounded pretty good, but they seemed to be tongue-tied when we got into the church—maybe it was because the ATS girls were there in formation.

Our plan for tonight is to go to the bath house. This will really be the first opportunity I’ll have had since being in the Army of sitting in a hot tub of water and taking my time about bathing. It’s more than worth the “fī’p’nce-haep’ny,” which includes towel and soap.

Sometimes as I hop off my bike I wonder if I’m really here in England, and whether, when it’s all over, I’ll be able to believe that I really did all the variety of things that I’m doing.

November, 1943—London is very interesting, but it takes more time than we had to really get around much. One thing we learned is that it doesn’t always pay to take a short cut between two points. The side streets twist and squirm so much and often just stop so abruptly that you are apt to be completely turned around and lost within a few streets of your objective. When you ask somebody how many blocks to a certain street they give you a blank stare, because blocks are unknown. You can see how the city has grown up practically around old paths.

The blackout here is something I have not mentioned before. It’s really black! You bump into people constantly.

We went to the Mayor’s Ball a week ago, but there wasn’t the customary large attendance, we couldn’t stay for long, the supper

didn't seem as *de luxe* to us as the English thought it, and the waitress spilled beer down my neck, which is always a bit uncomfortable as well as embarrassing, so we didn't have a wonderful time.

Tonight is a stay-at-home with most of the gang, and down at the other end of the barracks the "jamboree" is in full swing. Violin, guitar and mandolin, and a bunch of hill-billies and Deep South wailers are filling the air with sweet (!) moosic. National Barn Dance is nothing!

Have you been wondering how I felt about driving on the wrong side of the road? Well, it didn't take long to get used to that—but I still find that I look in the wrong direction when crossing the street, and in London I had some close shaves on that account.

January, 1944—Yesterday I took a bit of a bike tour with my pal, Bob. The names of the villages—too bad I can't tell you some of them!—are almost as quaint as the hamlets themselves, and there is always a bit of history behind each name. At one place I managed to buy a head lamp, tail lamp, spare tube, clips, tire removers, valve inserts and a bracket for "Phoebe II," my bike. On the way back Phoebe acted up a bit, but I nursed her along and we managed to get to Mrs. Stephenson's in time for tea.

Although I landed on a davenport whose springs had given valourous service, plus, and are now in complete retirement, I thought surely my *savoir faire* and customary calm would overcome the proximity of my knees to my chin. Well, things might have gone well if I had planned with foresight, but suddenly I found myself with cup and saucer in one hand and a dish in another hand and a scone somewhere and, of course, my knees in the middle of everything. I was beginning to feel sorry for myself, because the scone looked tasty and I was thirsting for the tea, but I smiled bravely and pattered on about Bach's D Minor Mass or something. However, Mrs. Stephenson came to the rescue with a skeleton of a tea table and I relieved my left hand so that I could speak more freely with it, and eat more freely, y'know.

February, 1944—One night during our furlough in London we got tickets from the Red Cross for "Hi di Hi," with Flanagan and Allen, a good variety show. Right at present the Londoners aren't very ardent theatre attenders, but the GI's surely are. In the inter-

mission we decided to go backstage, so I introduced myself and Bob did likewise. The result was that Flanagan and Allen invited us to their dressing rooms for a drink. In the second part we found ourselves involved in the show and I almost got off the stage with a first lieutenant's blouse on.

The Churchill Club, to which we belong, is very nice and only 1/6 from the Washington Club by taxi. The meals are a little higher than at the Red Cross, but they're better and the coffee is grand. There are apparently very few enlisted men members, but plenty of majors, colonels, looies, and so forth, both GI and United Kingdom. It's an English-sponsored club. The lounge room is in excellent taste, as is the rest of the club. Ashburnham House is very old and was connected somehow with Westminster Abbey. In the reading room is a teletype, and downstairs there's a bar, too.

PAUL SCHAGEN

By a Lieutenant in the Army Nurse Corps, from North Africa, May, 1943—One day recently I went on a trip to an Army Post nearby, where there is authorized swimming. The breakers would make you think of Stinson Beach, so, as you can guess, I have done more sunning than bathing, and my tan is pretty good. The beach is very lovely, and both it and the town look a lot like southern California.

The most interesting thing I've attended was a native wedding feast and entertainment, and it was extraordinary for an American woman to have the opportunity to attend. I went with a group of Army officers. The bridegroom was a waiter in the hotel where they lived. It turned out that he was marrying loftily into the family of the Caid of the region, and so the Caid himself received us first for tea.

We gave a big dance on the night of May 5, the anniversary of the day the first group of us took our oaths. We held it in a beautiful villa in the city, and it was really a wonderful party—with a Cinderella finish, of course, when we came home to our tents and crawled into our sleeping bags!

July, 1944—Today is July 4. I worked most of the day, but had some morning hours off and went into town. We saw a thrilling parade—not tremendous in size, and yet so formidable. I was so proud of our own country's representation that I all but wept. It

struck me with surprise that it did not seem incongruous for the British to be publicly observing our Independence Day with us.

You would have loved seeing some of the groups go by, and watching and hearing the various bands: all sorts of uniforms, kilts and bagpipes even; a huge French officer wearing a monocle; a native band tooting away and tossing trumpets into the air now and then. The big crowds all along the sidewalks were almost as interesting as the parade.

A small group of American nurses marched. They had been well drilled and performed gratifyingly well, and we were glad.

In some ways, really, we nurses are especially fortunate, and we realize it. Nursing is our own work, and our part in the Army is to go right on doing it, and it is recognized as necessary enough to bring us overseas where so many American women would so gladly be serving if they could. It gets to be a long drag some times, but I know that I would be pretty disappointed if I were obliged for any reason to give it up before I could make my time overseas count for more.

We are encouraged that war news is getting better. We all cling to a radio at news-broadcast time, if we're anywhere in the vicinity of one, and wish and hope and pray that things will continue to go favorably and rapidly.

Off duty, there are occasional afternoons at the beach, some movies, and some dances. We dance a lot, when we are not overly busy, and it helps time to pass. Dates here are not unlike those at home, except that when your admirer turns up he is apt to bring one or more cronies with him—a comparable showing of multiple escorts at home would create surprise, to say the least!

Some day our turn to move will come up again, and then we'll probably be very busy. We're all restless now, but we've learned to take one day at a time; fussing accomplishes nothing.

BESSIE LAWRENCE

By a Storekeeper 2c in the Navy, from Africa, May, 1943—Our village is reminiscent of California, for the houses and buildings are all of a light color and the roofs are of red tile. Toy-like railway trains run right by the camp. The equipment is all European, of course—no cab, as we know it, on the engine; the engineer stands up and peers out over the open sides of his compartment while the

fireman energetically shovels his coal into the yawning firebox. Three of the tiny freight cars would fit into one of ours! The coaches have most of their windows wide open, and as the little train stops at the quaint green, brown, and cream station across the tracks, a cross section of *humana Africana* peers out at "The Americans." There are French, Moors, Arabs, sheiks in their flowing robes and white turbans, soldiers both French and American. Truly it is all the *National Geographic Magazine* come to life!

The fresh green valley, on whose edge the tents of our camp are pitched, is dotted with splendid vineyards and patched with lush grain fields. The owners, French or Arab, live in the little town and go to their fields each day. On the hillsides here at camp are many kinds of beautiful wild flowers seemingly at the peak of their perfection. It looks like home! We are living in tents, eating in the open from mess kits just like the Army—in our khakis, too, sun helmet and all. I'm enjoying all the newness of this strange life.

March, 1944—During January I had several fine long hikes in the hills near our base—the very finest kind of hiking. It takes but a few moments to leave behind one the tiny town in which our base is located and to get into the hills, where there are very old French roads or the trails made by countless Arabs riding to and from the little town for decades. The roads and trails will take one through villages where the mountain Arabs live.

They call themselves the Khabile (Kahbeel), and they are a fine, industrious race. Centuries ago they were driven to the ridge crests by the fierce Berber tribes. However, the Khabile were the gainers, for it drew them together and now they farm communally the rich hill and mountain land. Where the Berber has made no progress the Khabile have prospered, many even going to France to work for a few years and then returning to live in comparative luxury. One little post office in the Khabile country handles a greater franc value of incoming money order business than any other in the French colonies in this part of the world.

Most of the roads lead to the ridge crests and then follow the course of the ridges to the various forts built over a century ago to protect the coastal lands from the fierce hinterland tribes.

In the town where our base is located the Arab women wear the veil common to the East, but in the hills and in their villages one

sees the unveiled faces of the women of this race. Often they will greet one—especially if he be an American. The greeting is either in their own tongue or, more often, in French.

I always take some of my candy, gum and cigarette ration on these trips, for often these things will "break the ice" where nothing else would. At heart these are fine, genuine people who are misunderstood by so many whites because of the fictitious publicity given them.

From these ridge crests, where my hikes often take me, there are spectacular—even breath-taking—views of the valleys, which often carry winding shallow rivers; of the sea stretching away to the distant blue horizon; and of snow-capped, jagged, Sierra-like mountains far to the south.

From Italy, June, 1944—Speaking of hiking, had a grand one myself last Tuesday. The officers were kind enough to give me "liberty" at 11:30 A. M., so I had the necessary time to reach the peak of a mountain I've wanted for years to climb—Mount Vesuvius.

At the station where I left the interurban electric line I took a tiny trolley which brought me up the gradually rising coastal plain to the base of the steep foothills. There I took to a steep trail that leads up between the densely planted farms of the peasants, where, between rows of fruit trees, are planted corn, tomatoes, beans, and grain, while all about are grapevines. From the observatory a wagon-road winds up and over an escarpment and into a high, barren valley. From where we stand, in this seemingly God-forsaken fastness of lava, bare cliffs, and jagged walls, the final fifteen hundred feet of the mountain rise stark and steep. Not a shrub or a single blade of grass grows on this pile of dust and shale and fine gravel.

The trail is one of those heart-breaking affairs where the foot sinks into sliding dust and gravel and slips a bit with each step. Although only thirty-five hundred feet above the sea, one's heart pounds as on a high Sierra pass. Up and up, through gray, brown, red, and even a sulphur-stained yellow dirt, one labors. Little yellow butterflies and red lady-bugs are here and there. One wonders how they live up there without a trace of a green plant anywhere about.

At the top of the climb one comes abruptly upon one of nature's

awe-inspiring sights—a great hole several hundred feet wide and more than a thousand deep! The view is stupendous! Below is the crescent-shaped bay shining in the sunlight, the great city, the fertile agricultural lands close by, the Blue Italian mountains, the islands off-shore and the wide blue sea. DAVID B. STEARNS

By a Staff Sergeant in the Army, from North Africa, August, 1943

—Certain parts of Northern Africa are quite mountainous, and most of the mountainous section is covered with small trees and brush. Oleanders grow in wild profusion along creek and river banks. In all the small mountain valleys which we saw during one most enlightening train trip, Arabs were busy harvesting grain and tending sheep. Olive trees seemed to grow everywhere.

The small toy locomotive is nothing more than a tea kettle on wheels, as it goes chugging along, pulling a string of cars. The passenger cars are air-conditioned *a la Africa*—that is, there are no windows, merely shutters. It is either hot or cold. When it gets dark—there are no lights—one tries to go to sleep, sprawled over the wooden seats. It gets pretty cold. One needn't worry how much to tip the waiter; the meal consists of C rations.

As our "tea kettle" approached one small grade, it refused to budge—as stubborn as a burro. The Arab engineer and brakeman started a volley of conversation, after which the train was separated into two sections and the locomotive pulled the first half to the top, placed it on a side track, then returned for the second section.

What a relief it is to ride on a GI locomotive with a GI engineer! It almost brings me back to the States. In the morning when the locomotive is halted I grab my helmet and ask the engineer for some wash water. He opens a spigot and I have hot water for shaving. What luxury in Africa! WILLIAM H. SATTLER

By a Corporal with an Engineer Combat Regiment, from Sicily,

August, 1943—Life here is rather rugged, but I have seen some very beautiful country, which is a great deal like California in spots. Most everything that is grown here we have in California: almonds, olives, lemons, oranges, grapes, melons, and figs. The melons and figs are really superior to ours. The tomatoes are the smallest and toughest I have ever seen; on the other hand, the onions are the largest.

There is little idea here of what the word "sanitation" means. Small homes are almost beyond description. The island breeds millions upon millions of disease-carrying insects. We have been nearly eaten up with them. While we did a good deal of cussing in the States about "shots," we are all glad now that we were given them.

However, this is a beautiful island, and has many interesting places and lovely buildings. Most all of the cities look like huge fortresses, being made all of stone, and usually high on a hill.

I was fortunate in being able to visit a very old cathedral which was started by the Normans in the twelfth century, practically completed by the Spanish between the thirteenth and sixteenth centuries, then finished by the French Jesuits. The rafters must be a yard square, and they are all of a hundred to a hundred and fifty feet high. Every inch of these rafters is minutely carved. The walls are of stone. All around the altar are thousands of little figures carved in wood; these in turn surround a few paintings, which appear to be French. In one of the outer rooms is a wonderful tomb of marble with Egyptian carvings. The 5-by-5-by-9-foot marble block is so pure that you can almost see through it. The workmanship is as fine as anything I have ever seen. A wooden duplicate of this tomb has been made so that it could have been replaced in case of its being destroyed, but fortunately the church was hit in only one spot, with no damage to any important features. RAYMOND G. L'ESPERANCE

By a Red Cross Recreation Worker, in France, August, 1944—
This has been quite a war so far—a tremendous mixture of fun, pathos, tragedy—everything all mixed up. Even at first when we were operating Mrs. Murphy's Free Lunch Counter in the middle of receiving and darned near helping nurse badly wounded patients, things were continually being very funny, and we had a great deal of gaiety with blood all over the place—figuratively, usually, but literally at times. The tone of our whole set-up (Red Cross, that is) is gay. Our "rec" tent is gaudy as can be, with everything painted red, yellow, white, and green, and pin-up girls all over the place, and wooden shoes painted yellow to use for vases and ashtrays. I tour the wards each day with a marvelous creation named "Lil Jr.," a book cart made of a box mounted on four miniature balloon tires from a German trailer. Jr. is painted white with red crosses to protect me from strafing, and his name is on each

side. He has a long handle with which I push him and he manages to look as though there should be a squalling Italian baby inside him. Everyone loves him dearly, and I wouldn't part with him for any fancy traditional book cart. Maybe he hasn't shelves, but he's just the right height for people to lean out of bed and reach into.

It's a very important point that you can't afford to recognize the horrible part of it all. Once you pin pity down and concentrate it on individuals, then it does something lasting to you. You just can't talk about the sad things. Naturally you get the unholy jim-jams sometimes, but you just mustn't run and tell people what gave them to you. As soon as you speak of them they become real—otherwise they're just a bad dream.

Living in the field isn't too much of a trial. My air mattress keeps me comfortable at night—it's on an army cot—and my sleeping bag is adequate, though nowhere near so nice as my one at home. By the time I get home at night it's dark—blackout is at 10:15—and we have no lights, so I just go to bed. We get hot showers a couple of times a week and have our heavy laundry done by the hospital laundry. One slight difficulty is the tendency of everything to mildew, and the mosquito situation is bad at the moment. However, we get along very well; probably if I took a good look at me I'd be slightly shocked by my general dirtiness, but I haven't time. I must say I'm not looking forward to winter in a tent, so best we get the war over.

The hospital set-up is this. Patients come first to a battalion aid station—right at the front. Then they go to a clearing station a little way back, from which they're sent as soon as possible to field or evacuation hospitals, which are the first ones to have nurses. The field hospitals are smaller and break up into platoons so that one platoon is usually very near the front. They take mostly chest and belly wounds of the very serious non-transportable kind, and in the army I'm with have no Red Cross. We get the rest of the cases, plus a lot of their type, too, since they haven't the capacity. We keep transportable patients just long enough to operate on them and get them on their way—frequently just 24 or 48 hours. However, if a man can return to duty in a few days, he'll be kept here. And a serious case stays until he can be moved safely.

I wouldn't have missed all this for anything. If they're going to have their gosh-darned war I want to be right in there. I have a

feeling that when it's all over I'm going to feel pretty burned out, but I guess it's been worth it. NANCY JONES

By a Lieutenant in the Air Corps, a prisoner of war in Rumania, June 19, 1944.—I thought perhaps you might be interested to know what happened to me. I had the misfortune of getting shot down—and so I'm now a P. O. W. I'm being treated all right, but of course miss San Francisco and the Club. I hope we can all get together some way after this is all over. Been trying to get hold of Jack A. No luck yet.

Please say hello to everyone for me in the section. How's Barbara's baby? Well, until we are in Yosemite again!

CARL ROSBERG

From a Sergeant in the Canadian Air Force, a prisoner of war in Germany, June 14, 1944.—Dear Doris, I hope your house is not too lonely now with Dick away. Will always remember the nice parties there and the lovely view of the Bay. I'm sure Cragmont fiends will be making things merry before long. Tell Charlotte hello, and was I surprised over Dave's red-head! The boys are doing swell and we get all the news. JACK ARNOLD

A Soldier's Farewell to the Heights

By NORMAN BRIGHT

THURSDAY morning, July 3, 1942, I walked up the little snow hillock under which stands the summit cabin of Mount Adams. Years before, while attending Bellingham Normal School, I had started my big peak climbing on Mount Baker. Then followed ascents of St. Helens, Olympus, Glacier Peak, and, finally, Rainier. Bob Quick and Gordon Flint, my 1941 companions on Rainier, had planned the Adams trip with me, but both had been obliged to withdraw at the last moment. So it had been necessary to start out alone or forego the climb for a good long time.

I planned to make my attack from the west, up the West Ridge adjacent to the great Adams glacier. This side of the mountain is generally considered unstable, and some experts consider climbing from this side hazardous. However, the first party to do it, a three-man party in August, 1924, described the ascent of this 4000-foot lava buttress as "easy but sensational." Studying it Monday from the Midway Lookout, its slope did not appear to exceed 35 degrees, except at its upper limit. Apparently easy of access and climbable along its entire length, the only question about the route, from this viewpoint ten miles distant, was: "How formidable is the steep snow or ice slope directly above it?"

Probably the Tahklahk trail is the most accessible route from Chain of Lakes road. Within three miles one arrives at a point at which it joins the Pacific Crest Trail in a wide flat meadow. Divide Cabin is located nearby. This place, at 5000 feet, is excellent for a base camp. So, although I did not find the cabin, I left my pack-sack here at the meadows a little after one o'clock Tuesday afternoon. A cedar windfall, a snow streamlet, and a tiny grove of alpine hemlock, disclosing a view of the northwest face of Mount Adams, satisfied all requirements for a mountaineer's camp.

With all afternoon and evening to scout out the route and locate a high camp, I set out. By five-thirty I had reached a point far up on the West Ridge. Here, at 10,000 feet, I was sufficiently near the snow slope to determine its feasibility for climbing. It would "go" all right. Below, at 8600 feet elevation, the ridge leveled out

nicely where a stream emerged from the snowfield. Here would be my Wednesday's camp. I should have to carry up a supply of wood from my 5000-foot camp, and some boughs, too, for mattress and for use as markers on the summit snow slopes. That would be my job for the morrow—to get a camp up to 8600 and then rest up for a quick climb very early Thursday.

Now, with my heart thumping away from the last stiff pull up over the steep rocks, I sat down to enjoy the view before returning the four rough miles to camp in the meadows. There was Mount Hood, visible for the first time, over the next ridge to the south. St. Helens, Rainier, and Goat Rocks had been an inspiration throughout the entire climb up the ridge. I had only to turn my head to enjoy the diamond clear views of two of Washington's snow sentinels, the shining eastern facets of St. Helens, snow maiden of Indian legend, and the great southern slopes of Rainier. I wished for binoculars. I berated myself for not having brought camera and film. Rarely before had I experienced such a fine extent of clear weather on a peak, and probably never again should I experience as good on this one. However, though I could not bring it back for others, I felt supremely happy to be there to enjoy a scene of unparalleled beauty. The wind moaning up through the canyons, the panorama of lakes, forests, lava hills; the foothills in shades of blue and purple, and the great cumuli towering above the peaks, all but cast a spell upon me. However, an avalanche thundering down the neighboring ridge interrupted my reverie. Turning, I watched it fall in a white cascade through a narrow chute, then pour down the steep-banded face, coming to rest on the slopes of the glacier below. It was high time to be on the way down.

By noon Wednesday the "horse" work was done. A camp had been back-packed to 8600 feet. I was well established in as fine a high camp as one might wish for. A stream of ice-water slipped by ten feet from my bough bed. Never could one find finer fuel than wind-and-sun-dried Alaska cedar. The weather promised to remain fair and my high altitude food rations were sufficient for several days. I had only to cook a supper of dehydrated, precooked corn and a pot of tea; to enjoy the scenery; and to rest until 1:30 A.M. I believed the ridge could be climbed in two and a half hours. I could use a belt flashlight for the first hour; the moon would "come over the mountain" at 2:30, and by four o'clock it

would be bright daylight up here, though the sun would not come in sight until 5:15.

It was hard to pull myself "out of the feathers" in the cool of the night with sleep seeming so attractive. Dressing inside the bag, I managed to get up gradually. Following my tracks of Tuesday, I was soon picking my way up the ridge, slowly and carefully, but making better time than on the previous trip. At 2:40 the three-quarters moon rose over the head of the ridge. I snapped off the light and put it in the pack along with the emergency items, the lunch, and the hemlock boughs. Arcturus hung a few degrees above the horizon, while the Dipper rode aloft where Rainier's summit caught the first faint glow of day.

From the place where one puts on crampons to walk up the steep slopes of frozen snow, one soon gains a well-defined ridge. This leads to a false summit. Knowing that the true summit lay due east three-quarters of a mile away, I knew I should have to count at least 1150 paces. Nevertheless, this first summit may deceive a climber—until he surmounts it to find himself only on the outer edge of the great summit snowfield. To his left the ridge drops down to a saddle leading off on the left to the broken crevassed slopes of the upper Adams glacier, and to the right to a steep snow couloir dropping sharply between rotten sulphur-colored ridges. The eye follows the ridge as it swings upward along the skyline curving back south and ending with a tiny snow hillock.

In this lost world of the summit what does a lone climber find to keep him company at this early hour? The morning star, the moon, a trace of sulphur smoke, and along the horizon a band of blue-black haze touched by the rosy-fingered dawn along its upper edges. Only the sound of crampons on snow cuts the unearthly stillness.

A few moments and the summit is reached. All of Washington and Oregon now lies below, except for a 2100-foot summit-section of Mount Rainier.

And what does a climber see from the summit? One hour, from 5 A.M. to 6 A.M., was not enough to enjoy the beauty of it all. One could command a sweep of all horizons except to the northeast where the high summit ridge intervened. The true summit of Adams is hidden from many viewpoints because it is too far toward the south. Moreover, it is not the point of a great spire, but the end

of a gently sloping ridge within a mile-wide snowfield.

Before descending, I enjoyed a spectacle, doubtless rarely seen, one which amply rewarded me (had I not been fully rewarded every step of the way) for my efforts. On turning from the fiery splendor of the rising sun, I was startled to see a tremendous pyramid, a virtual colossus, towering away from Mount Adams and terminating in the sky. It was the shadow of Adams cutting across the lowlands and ridges, darkening a great triangular area. On the horizon, lower than the apex of this great dark pyramid and equidistant from it on either side, were the rosy figures of Hood and St. Helens.

At 6:45 I had returned across the snow to the top of the West Ridge, marking the route with hemlock boughs. At 8:38, seven hours and nine minutes after leaving, I was again at 8600 feet. I had proved to my own satisfaction that big mountains should be climbed at night when the cool air is conducive to hard work, while the snow is firm, and avalanche danger is at a minimum.

Souvenir

BY KATHERINE CARR HENZE

Let us go hence, we have been here so long;
The roads are all inviting.
The smallest rock would seem a fortress strong,
The shortest trail exciting.

To Northward there are peaks, as well you know,
With frozen lakes and slopes of trackless snow,
Where blinding sun beats down, and chill wind soughs
Above the rugged pines' undaunted boughs.

Once we found a dragon's den,
Far from sound or sight of men;
Could we seek it out again,
I wonder, if we tried?
Luring depths its shadows hold,
Icy pool with glint of gold;
You were brave but I was cold,
And it was dark inside.

To Eastward there are plains as red as fire
Where massive columns rise, and many a spire
Erected there and carved by giant hands
Among the sagebrush and uncharted sands.

Once we found a lofty hall,
Rough of floor and straight of wall;
Down its apse a waterfall,
And overhead the sky.
Moonlight fell on bridge of stone
Which from earliest time had grown,
Undisturbed, unseen, alone,
Curving proud and high.

Let us go hence, we have been here so long,
The roads are all inviting;
The smallest rock would seem a fortress strong,
The shortest trail exciting.

The Photography of Joseph N. LeConte

By ANSEL ADAMS

JOSEPH N. LeCONTE knows and loves his Sierra. He does not claim any glory, any prior rights of exploration, or any authority—other than the understanding of their meaning and beauty. He has gone among them many times, photographed them, written about them, mapped them, enjoyed them, and stimulated untold thousands to follow the fragrant paths under the clean skies.

His relationship to the mountains reflects a noble quality of life, the direct simplicity a commonplace spirit never attains. His photographs are not the fruits of intellectual cogitations; they are the natural, inevitable selections of a man very much in tune with the world about him, very much aware of its beauty, and of the importance of accuracies and fluencies functioning together in expression.

His work clearly shows that the camera yields images of experience as well as images of things. The resonances of the world are not revealed through self-conscious effort; rather, they come to us in the natural moods of living and enjoying. Photography, as have the other arts, has suffered from the emphasis of sophistication and it is refreshing indeed to see camera work done with complete sincerity and affection, with the desire to *make*, not to *take*.

* * *

"Little Joe" was born in 1870, the son of one of the greatest men of science of his age—Joseph LeConte. His life was deeply influenced by the warm environment of the Berkeley family home, and by his experiences in the early days of the University of California, wherein his father and his uncle John LeConte were leaders of the faculty and dominant in their respective fields. Writing of those times, he says, "The whole sweep from the Berkeley Hills to the Bay was one unbroken prairie, with here and there, at perhaps half-mile intervals scattered farm houses."*

The trees, the beauty of Strawberry Canyon, the "wilderness" of the University Campus, the kindly and generous home life, the

*The quotations throughout are either from his "Recollections" (Mss.) or from letters to the writer.

many friends and associates of school and college days, stimulated his perceptions of nature and accented the quality of friendship for which he is beloved by all. His first trip to the mountains was to Lake Tahoe, in 1874; where, at the age of four, he made his first ascent of a Sierra peak, Mount Tallac, "my father carrying me in his arms most of the way." His first trip to the Yosemite was in 1878. "Father rode a small white mule, and Lieutenant Greenough, commander of the cadets at the University, rode a fine, high-stepping charger. The trip to the Valley occupied six days, but what a glorious trip it was! Far more interesting and enjoyable than the modern trip of six hours."

In the summer of 1889 he made his first photographs, in Yosemite, with a camera belonging to Ross Morgan, one of his companions. "The Kodak had been perfected by Eastman in 1887. In this instrument the film (emulsion) was mounted on paper, and after development had to be stripped off and mounted on celluloid backing." The images were *circular*—2½ inches in diameter!

"On my next trip, in 1890, we used an improved Kodak. The prints therefrom were 4x5 inches, and for the first time film was mounted on celluloid backing. Each roll of film was long enough to make one hundred negatives, and the camera had to be loaded in the dark—no paper protection for the roll. The film was passed around a roller five inches in circumference, and steel points on the roller punctured the film between the exposures so you could tell where to cut them apart." No mention is made of the camera used in 1891 and 1892.

"My own first camera was a Kodak also—what was then known as a 'Folding Kodak'. On the back could be snapped a roll-holder, or one could fit on a ground-glass and use 4x5 plates. I used this camera first in the mountains in the summer of 1893, using film entirely. I used it in 1894 and in 1895 with glass plates. The lens was called a 'Rapid Rectilinear' and came with the instrument."

An exceedingly interesting item appears in LeConte's "Recollections." In the Electrical Department at the University a research program included the investigation of X-rays, when, in 1895 "the small son of Professor Kower was accidentally shot through the arm and the bullet lodged therein. The boy was brought to the laboratory, and after an exposure of one hour and a quarter the photographic plate showed the surgeon the location of the bullet. Such

exposures now-a-days are made in a second or two—practically snap-shots. However, this radiograph was probably the first to be made in this country—certainly the first on the Pacific Coast, taken as it was only a week after Rontgen's discovery."

"In 1896 I bought a new camera. I do not recall the make, but it mounted on a regular tripod, and had the regular bellows. The size was 5x7. The lens I bought separately, it covered a 5x7 plate, and had a focal length of $6\frac{3}{8}$ inches. It was a real Zeiss lens, from Germany. This camera had no film attachment, and I used glass plates entirely during the summers of 1896, '97, '98 and '99. It was the best lens I ever had."

"In 1900 I got my third camera, also a 5x7, but with a reversible back, and a lens, made by the Bausch and Lomb Optical Company, called a 'Zeiss lens.'" (Zeiss licensed several concerns to make lenses under their formulae—hence a "Bausch and Lomb Zeiss Tessar," a "Kodak Zeiss Tessar," etc.) "This lens could be used for three focal lengths. When both glasses were in, the focal length was seven inches; but with the first lens alone, it was eleven and one-half inches, and with the rear alone it was fourteen inches." (This lens was undoubtedly the "Bausch and Lomb-Zeiss Protar"; a most excellent objective and in very high favor today.)

Continuing from LeConte's letter: "I nearly always stopped down and used hand-cap exposures on the tripod. But I had a 'triplex' shutter, which would go to $1/100$ second. This camera I used in 1900, '01, '02, '03, '05, '06, '07, '08, and '09. By that time the thing had gotten so darn heavy that I left it at home. Then, in 1913, I got a regular (standard) hand Kodak and joined the ranks of 'snap-shooters,' so my real photographic days were over."

The "real photographic days" included those in which he produced a huge number of excellent photographs of the Sierra, made accurate maps of the regions visited, wrote numerous articles introducing these regions to the world at large, and became a charter member of the Sierra Club. He served as a director of the Sierra Club from 1898 to 1940, was its treasurer from 1899 to 1931, except for the two years (1914-1916) when he was president. He now lives in Carmel, and enjoys the appropriate title of "Honorary President" of the Sierra Club. His intense interest and devoted service to the Club and its functions, and the time and energy involved in the pursuit of his exploration and photography, were all

in addition to an intense and creative career in mechanical engineering and hydraulic engineering at the University of California where he carried on the prestige and accomplishments of his illustrious father and uncle.

He sums up accessory technical data on his photography as follows: "For my first 4x5 camera, I used Seed 26x glass plates, and sometimes Seed 23. I also used Carbutt's Orthochromatics. For the 5x7 cameras I first used Seed's 26x, but later I used Cramer Crown Brand. I usually carried 10 or 12 dozen boxes of these on a mountain trip in a water-tight box. I changed plates at night under a heavy blanket; by feeling entirely, no red light. Always used 6 plate holders for one entire box of plates. For developers, I used at first straight hydroquinone, and later a mixture of hydroquinone and metol, the so-called 'M-Q' developer. I always did my own developing when using glass plates or cut films. I had a fine darkroom back of my home at 2793 Bancroft Way, Berkeley, and also a well-equipped darkroom at the Mechanics Building at the University. I often think of my old photographic dealers in San Francisco; first Sam C. Partridge, and, after his death, T. P. Andrews, 109 Montgomery Street."

Apart from the charm of the photographs in subject and "seeing," it will be noted that the tonal values of LeConte's work are quite different from the work of the present time. Although the modern photographic papers are not suited to the abrupt scale of the old negatives, an approximation of the values of the original print can be attained by variance in exposure and development of the papers and by subsequent toning. The scale of the early dry plates was not dissimilar to that of the still earlier wet collodion plates which they replaced in general use. This scale was favorable to the "printing-out" papers then in use, but it is difficult to compress it in the range of the "softest" modern "developing-out" papers. It must be admitted that the old negatives had a crispness, decisiveness, and clarity which is not obtained today without special materials and methods.

One of the esthetic advantages of the early plate derived from its limited color-sensitivity. It was highly responsive to blue light, with the result that skies were rendered much *lighter* than with the ordinary negative emulsions of today. This gave the impression of *light* in the sky, brilliancy, atmosphere. Our modern films, especially

the panchromatic types, yield dark grey skies—perhaps accurate in a *color* sense, but lacking the emotional qualities of *light*. The old plates were totally deficient in sensitivity to red light, but that was of small consequence in regard to our landscape, where red is a rather unusual color. They were, also, rather poor in rendition of green; but as most of our conifers and mountain trees are quite dark in value, this discrepancy was not important. The conventions of today dictate the use of panchromatic film for almost every purpose; logically we should use orthochromatic film for most landscape work, and occasionally, with both orthochromatic and panchromatic film, we should employ the blue filter to accent aerial perspective and light skies.

Some of us are inclined to believe that the mechanical perfection of our equipment and materials automatically places our work above that of the past. In this we make a grievous error—the “you-press-the-button-and-we-do-the-rest” procedure, fostered by the manufacturers, results only in vastly increased output of images—not of ideas or expressions. The very fact that LeConte had definite limitations of equipment and materials to contend with made every picture more toilsome, more important, and also more intense. Things *had* to be right; there was little exposure-latitude in the negative emulsions. Transportation was difficult, trails did not exist, or, at best, were quite inferior to those of today. There were no exposure meters—by that anxious system of trial, error, and experience, the proper exposures were determined. In going through hundreds of LeConte’s negatives I have been impressed by the consistent accuracy of his exposures; even in the hazardous subjects—such as groups under trees in harsh light—he achieved a high percentage of success.

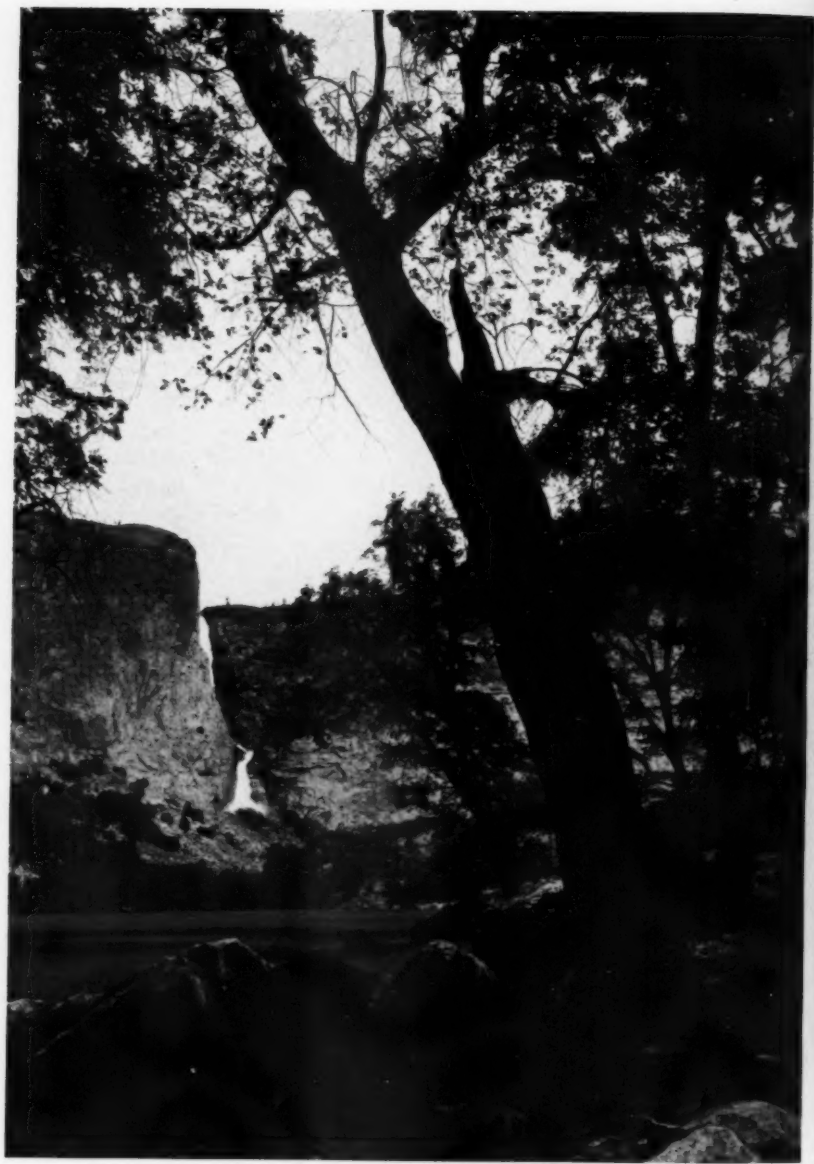
However, the most valuable elements of LeConte’s photographs are not the technical, or the historical, or the purely factual. Their quality lies in his “way of seeing.” Without this quality of “seeing,” all other aspects of photography are without true meaning. Never intentionally “arty,” most of his compositions reveal a sensitive reaction to the finest moments of the mountain scene. It is this quality that differentiates between a mere *record* and a *creative, sympathetic statement*. The best way to grasp his accomplishments is to examine the photographs themselves. Reproductions can only partly convey their content.

The Sierra is probably but slightly changed over fifty years, and this change is practically confined to the works and the damage done by man. Yet, when we see these early photographs, and talk with the man who made them, and read his diaries and journals, and learn of the friends and experiences of those remote, exciting days in a new land, it is a bit difficult for us not to believe that the air was a little clearer, the dawns a bit more refreshing, the horizons more enticing than of today. On the other hand, if we think deeply about it, we will discover that these qualities are within ourselves more than of the external world, and that the voices of the Sierra will always fall brightly upon receptive ears.

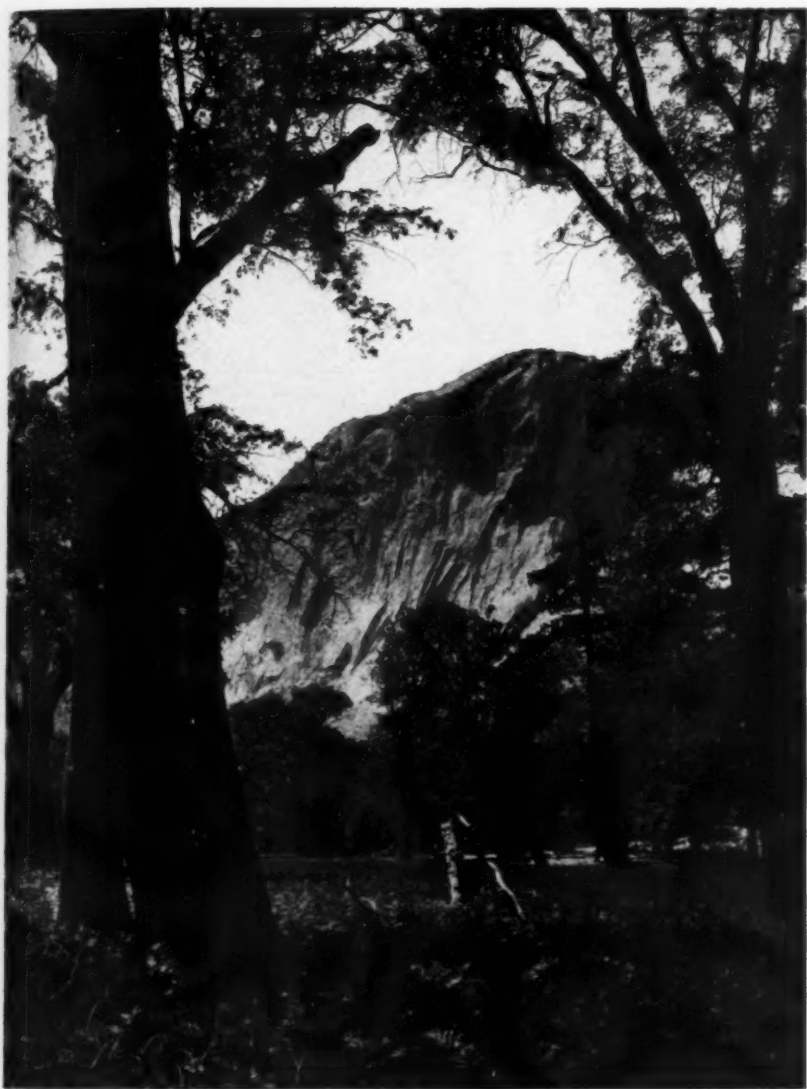


1. THE BRINK OF YOSEMITE FALL

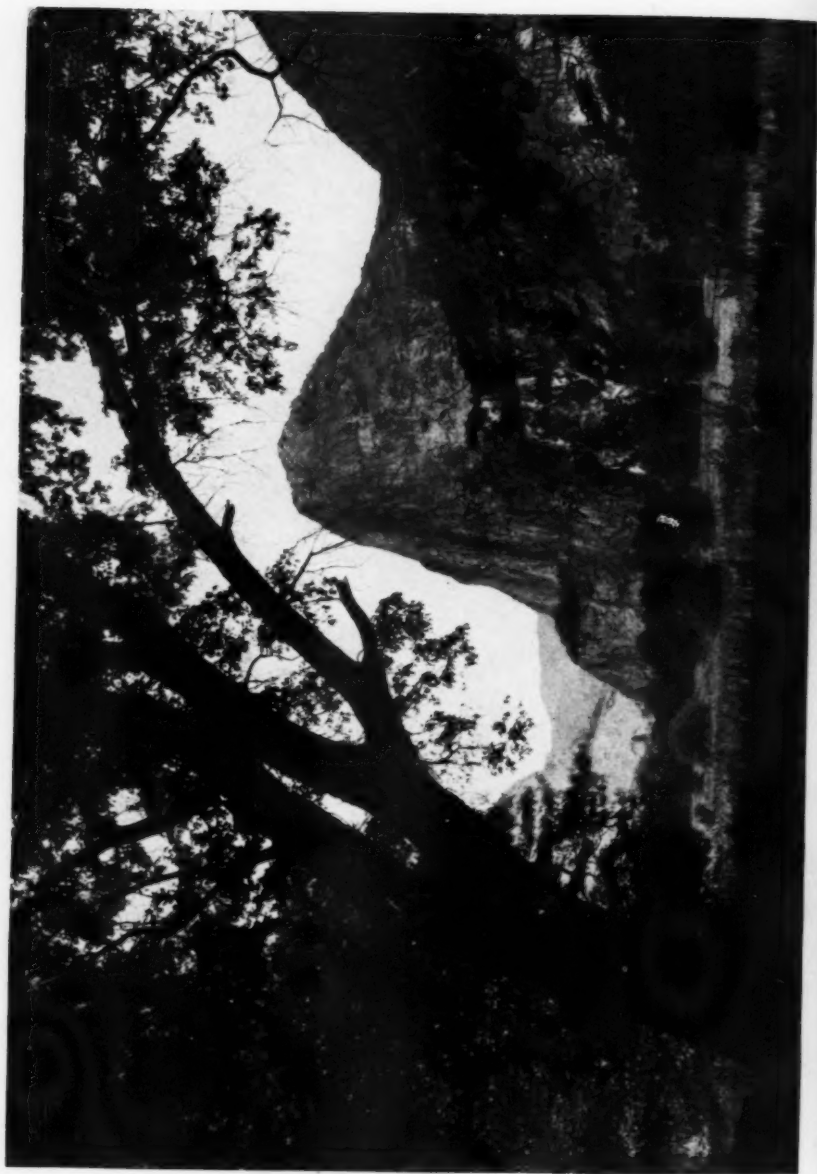
A COLLECTION OF EIGHTEEN PHOTOGRAPHS
BY JOSEPH N. LECONTE



2. HETCH HETCHY VALLEY

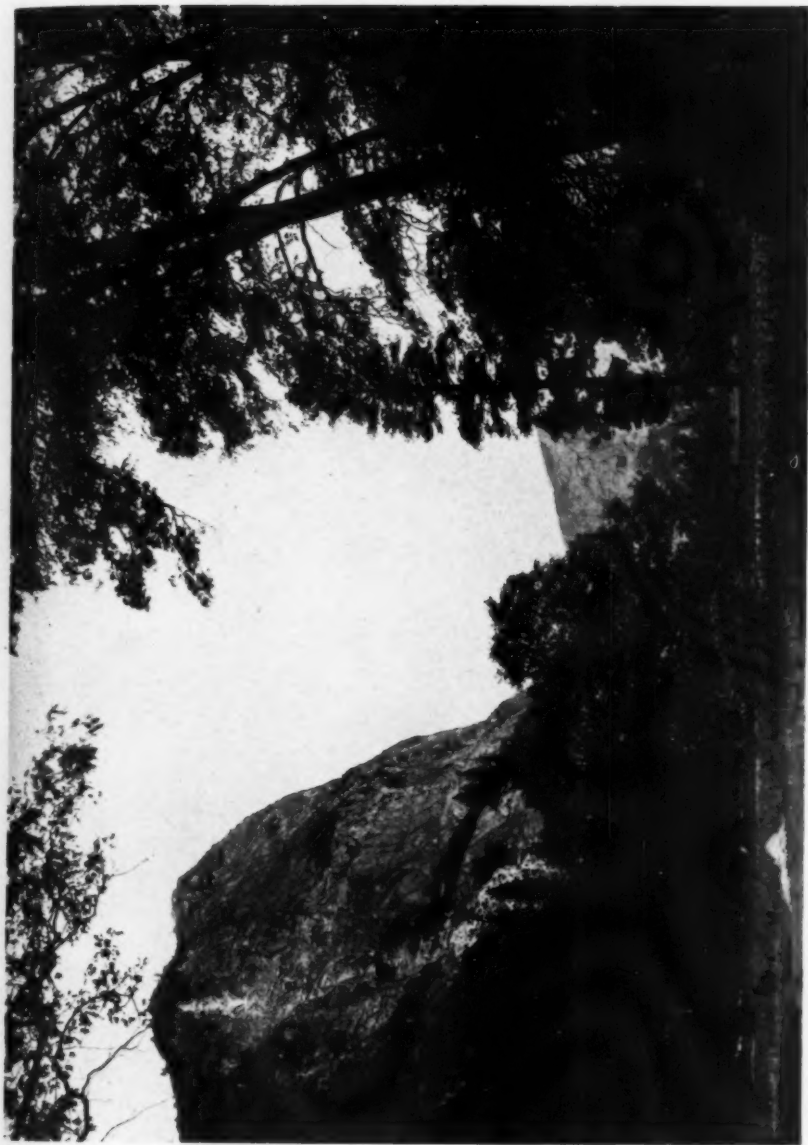


3 HETCH HETCHY VALLEY

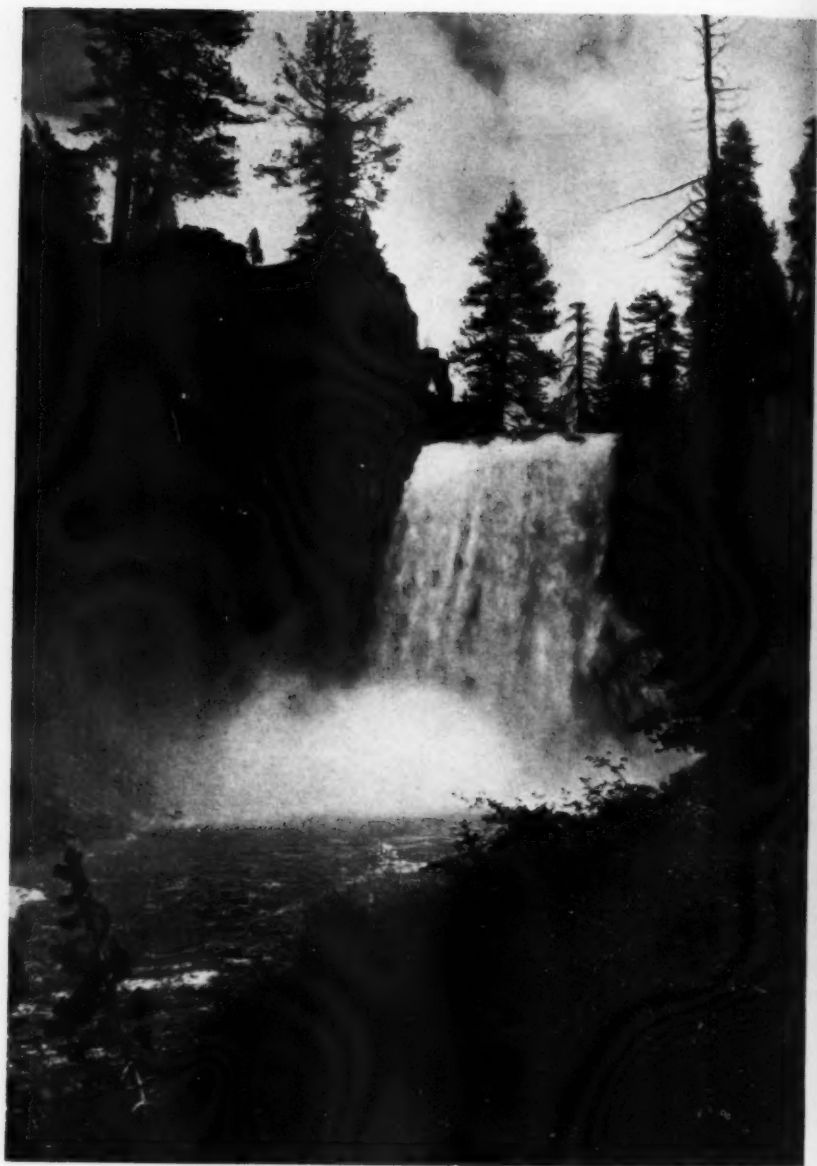


4. HITCH HITCH VALLEY

4. HETCH HETCHY VALLEY



5. HETCH HETCHY VALLEY



6. RAINBOW FALL.



7. TRIPLE FALLS, CARTRIDGE CREEK



S. BURNS CREEK FALLS

8. BUBBS CREEK FALLS

9. ROARING RIVER FALLS, KINGS CANYON



15. CIN MOUNT EXCEL



11. MOUNT LYELL AND MOUNT MACLURE

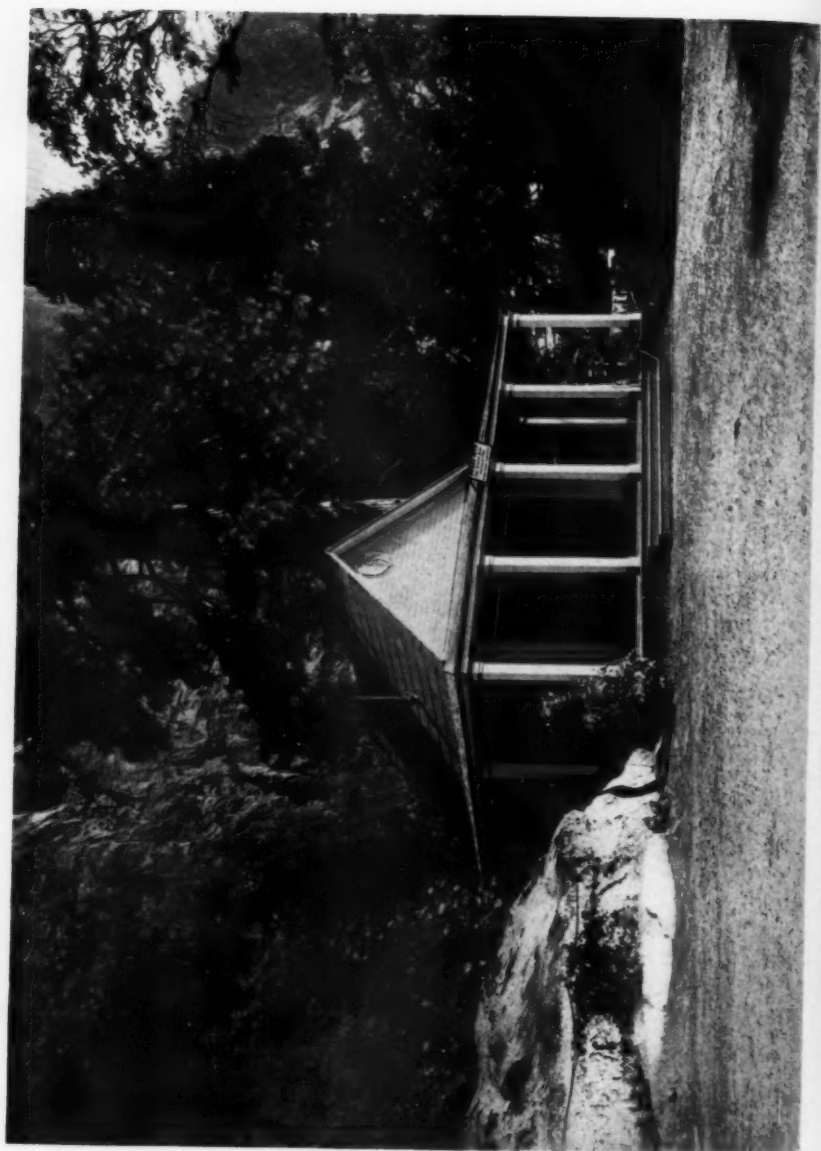


12. ON THE RIDGE OF MOUNT GARDINER

12. ON THE RIDGE OF MOUNT GARDINER



13. GROUSE MEADOWS, MIDDLE FORK OF KINGS RIVER

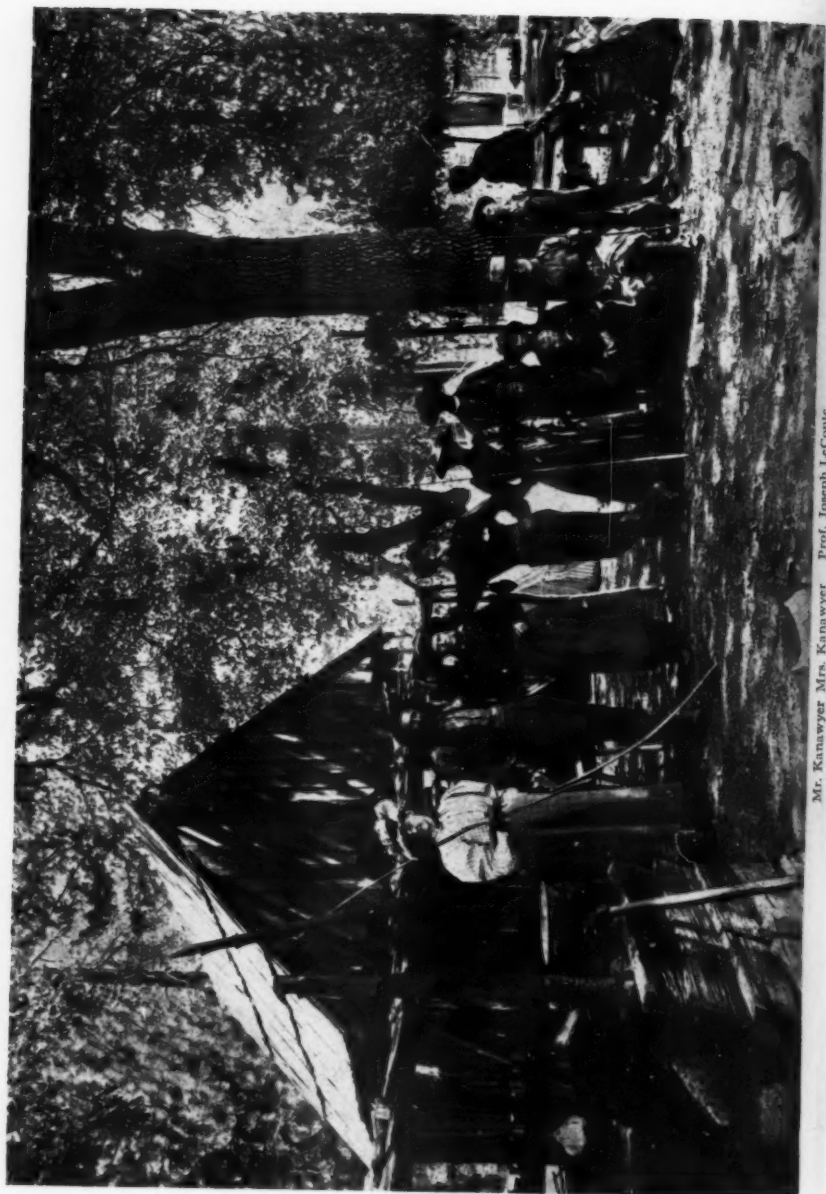


14. SIERRA CLUB LODGE, YOSEMITE VALLEY, IN 1908

14. SIERRA CLUB LODGE, YOSEMITE VALLEY, IN 1898



15. INTERIOR OF SIERRA CLUB LODGE, YOSEMITE VALLEY, 1898

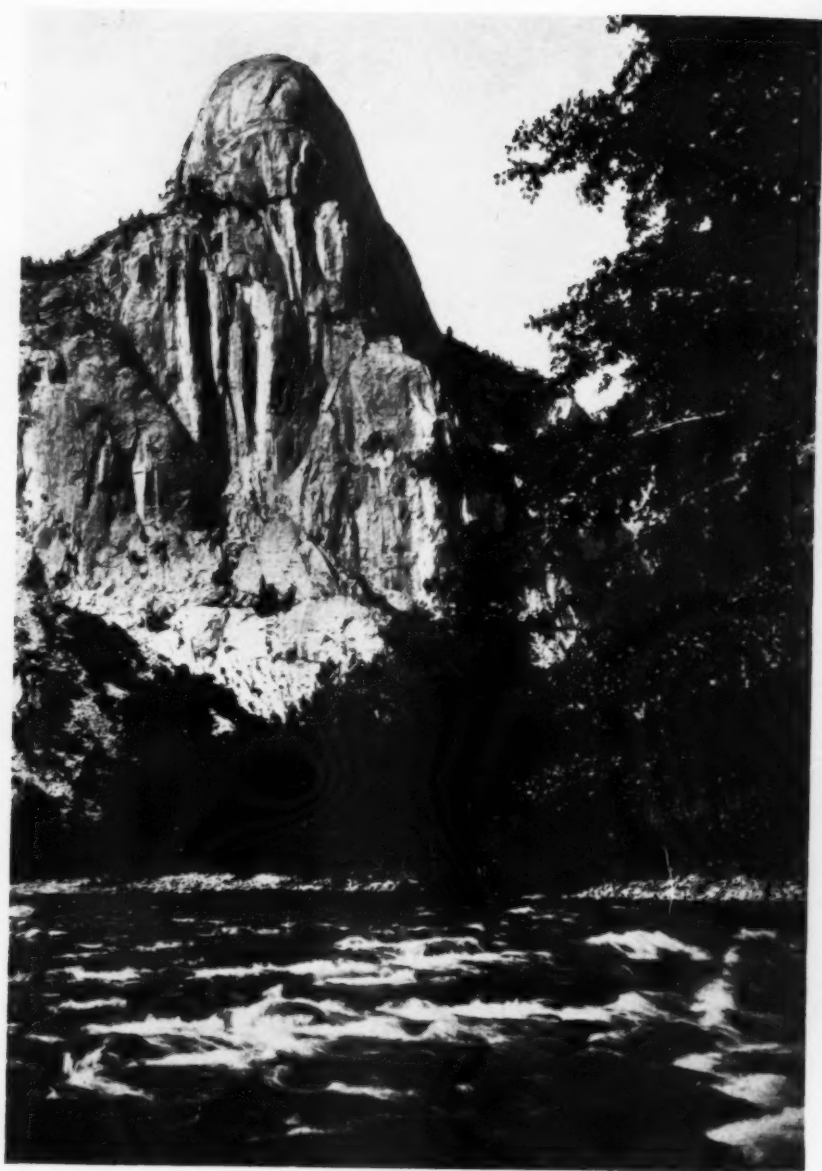


Mr. Kanawyer Mrs. Kanawyer Prof. Joseph LeConte



Governor Pardee President Roosevelt John Muir Benjamin Ide Wheeler

17. PRESIDENT THEODORE ROOSEVELT'S PARTY AT THE GRIZZLY GIANT, MARIPOSA BIG TREE GROVE



18. TEHIPITE DOME

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RED CROSS OF RUMANIA



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POST CARDS FROM PRISONERS OF WAR



THE PARASITIC CONE, ZAPIDO, FROM THE TOP OF PARÍCUTIN, DECEMBER 5, 1943
By W. A. Wickett

EL VOL.
By W. A.



EL VOLCAN PARÍCUTIN, DECEMBER 5, 1943
By W. A. Wickett



MEMBERS OF THE CLUB ON THE PORCH OF THE CABAÑA



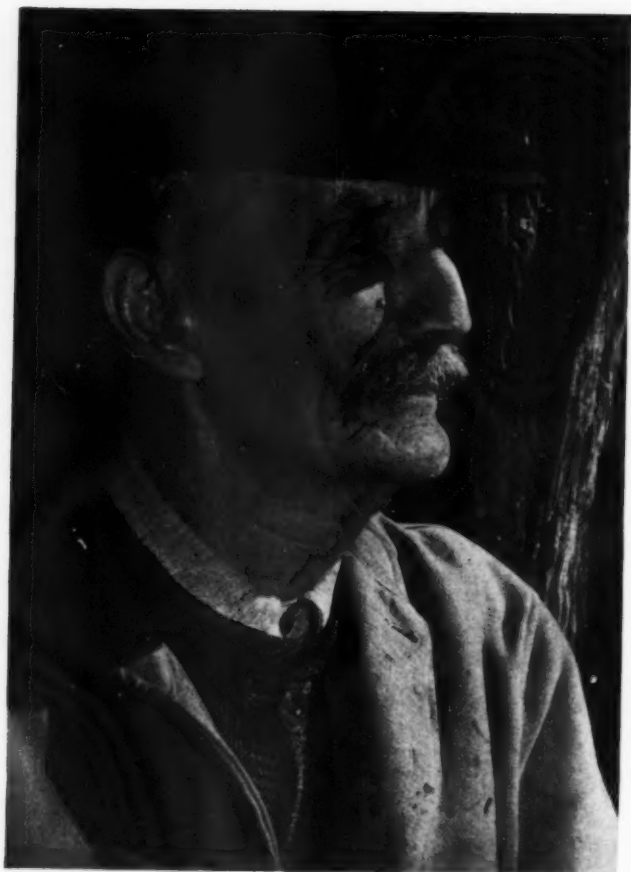
CABAÑA OF THE CLUB ANDINO BOLIVIANO



MACLURE AND LYELL FROM THE SUMMIT OF MOUNT FLORENCE, TAKEN IN 1943
By Daniel H. Condit



AT KEARSARGE LAKE, JULY 13, 1939
By Daniel H. Condit



FRANCIS HOLMAN
By Ansel Adams

Francis Holman, 1856-1944

By ANSEL ADAMS

FRIENDSHIPS made in the mountains seem of stronger bond than most. Perhaps the mutual awareness of inexpressible things, of the response to beauty, of the comradeship the wilderness evokes, makes human relationships more intense and more enduring.

As time goes on and the first lights go out, one by one, we are conscious that our lives have been patterns of experience—events and personalities blending into a rich and inevitable whole. I can only think of Mr. Holman ("Uncle Frank" to many of us) in terms of personal experiences, as these experiences were symbolic of his life and character. He took me on my first camping trip—with Admiral Pond and his daughter Bessie and a couple whose names I do not recall. We started out from Yosemite one cloudy dawn in July, 1917, on the Merced Lake Trail. Our first night was spent above Merced Lake at the confluence of Gray Peak Creek and the Merced River. As our trip was made on a day of storm and low cloud we saw little of the high mountains. However, on the following morning I crawled out of a very cold and damp sleeping bag and scrambled up the long granite shoulder defining the bend of the canyon at this point. From there I saw, in the cool dawn wind, the flaming sunrise light on the crags below Mount Clark. Intoxicated by my first intimate glimpse of the high mountains, I returned to camp and found Uncle Frank busy with breakfast. He gave me a knowing smile and said "Pretty fine, my boy, isn't it?" The mood of that moment was continued for many years and for many miles together on the trails—and it was always "pretty fine" in every way. I shall always associate his memory with the clear dawns, the great vistas, and the long sunny trails of the Sierra.

Francis Holman was born in San Francisco in 1856, was graduated from the Massachusetts Institute of Technology in the class of 1877, and was a member of the American Institute of Mining Engineers for more than fifty years. He was deeply interested in ornithology and vulcanology; during the seven years he lived in South America he climbed several of the highest cones. I believe he joined the Sierra Club from South America. On his return to the

United States he took an active interest in mountaineering and in the natural sciences. He was a member of the Mazama Club, the Cooper Ornithological Club, and the California Academy of Sciences. Details of his life are difficult to uncover, for he was modest to an extreme degree and rarely spoke to anyone of his past.

For several years around 1920 I was custodian of the LeConte Memorial Lodge in Yosemite, and in 1922 Mr. Holman and I were together in that happy venture. In 1924 he assumed full charge, and passed every summer in Yosemite Valley at the LeConte Lodge until 1940. In 1941 failing health and eyesight required that he stay at his home in Carmel throughout the year. It was there that he passed away on January 16, 1944.

All who knew him will recall his kindly and reserved spirit, his quality as a fine and simple gentleman, his love for the Sierra and for the myriad manifestations of Nature, and his devotion to the highest concepts of conservation. He did not know the meaning of "Appeasement of Principle." In the passing of "Uncle Frank" we, and the Sierra, have lost a great and good friend.

The Creation of Yosemite National Park

Letters of JOHN MUIR to ROBERT UNDERWOOD JOHNSON

The originals of the following letters written by John Muir to Robert Underwood Johnson, one of the editors of The Century Magazine, were recently acquired for the Sierra Club, by purchase, through the generosity of the late Albert M. Bender. Although quoted in part in "The Life and Letters of John Muir," by William Frederic Badè (Houghton Mifflin Company, 1924), they are published here in full, with only a minimum of editing for punctuation, etc. They should be read in connection with Johnson's account, in his "Remembered Yesterdays" (Little, Brown, and Company, 1923, pp. 278-296) and the articles and letters in The Century Magazine for 1890-1891, to which specific reference is made in the notes appended to these letters. Muir, in the summer of 1889, had taken Johnson into Yosemite Valley and on up to the Tuolumne Meadows and thence down to the great cascades and waterfalls of the upper Tuolumne Canyon. The appalling devastation created by sheep, "hoofed locusts" as Muir aptly termed them, contrasted with the magnificence of the scenery, convinced Johnson that something must be done without delay to preserve this area from further destruction. At a campfire in the meadows a plan to create a large national park surrounding Yosemite Valley and including the adjacent High Sierra was formulated. Muir was to write descriptive articles of the area for The Century Magazine and other publications, and Johnson, who had a wide acquaintance with members of Congress, was to urge the enactment of legislation creating such a park. The bill was introduced by General William Vandever, a Member of Congress from California. It was due largely to the untiring and effective team work of Muir and Johnson that this outstanding Park was created by Act of Congress approved by President Harrison, October 1, 1890.

WILLIAM E. COLBY

Martinez, Sep. 13, 1889

My dear Mr. Johnson,

Your telegram and letters reached me in due time. I fancy you think me deadily dumb, and so I am nearly. I have been stupidly

busy and that is my only excuse. A horde of oriental heathen¹ besides Swiss, Dutch, Irish, etc., to look after, and *Pic. Cal.*² into the bargain. By shutting myself up in a room of the Old Grant for two weeks I made out to wriggle through the woods of Washington and over the waters of Puget Sound. Then came howls for the Columbia and I shut myself up again from grapes and heathen for a week, but I am still entangled in the woods where rolls the O and hears but little sound from the dashings of my inkstand. At your urgent request and love for the Yo. Val. I have switched off or broken off from *Pic. Cal.* and Oregon and am trying to say something on Yosemite in the open letter way, but feel awkwardly anxious to say too much and therefore may likely say too little. Will send something soon and should it seem to you that this something is worse than nothing send the stuff on a flying excursion to the wastebasket and I will then say, Thank you.

In referring to the *Examiner* stolen interview³ I did not mean to say that the production seemed like your own words or style—How could I?—but only that it contained many of your views. That blackguard article in the *Argonaut* must have been written by Pix though Irish's name is beneath it.⁴ I meet him on the street now and then but never see him.

Two days ago I met Robinson⁵ and Wright, sweet, grimy and suggestive as they were, stepping from the Oakland boat on their return from the Kings River Yosemite. Robinson held me with his glittering eye on Davis Street and held forth on the wickedness and woe of the Yo. and its affairs in grand devil may care right or wrong style and denounced my poor peeping letter on the valley with great vigor but with fine fatherly regard withal. I quoted your favorite saying on the power of understatement in contentions of this sort, but he would have none of it. He modestly declared that the cure for all the Yo. woes was a band of lovely disinterested Commissioners made up of He, Me, and Hutch.⁶ He, the artist with the eye, Hutch with the long love, and me the poetico-trampo-geologist-bot. and ornith-natural, etc., etc. ! - ! - ! I told him that you mentioned the possibility of a short paper on Kings River and he said he wanted to write it, or if I was going to do it, then he wished to illustrate it and help to write it. His illustrations I have not yet seen but feel sure they are very good. I am going to see Wright's photos when I can.

Should my letter opus be too late in reaching you, go on without it and quote from that *Bulletin* letter and my talks with you as freely as you like.

The money was sent to your Treasurer for the bound vols. of the *Cent.* before the arrival of your letter and I suppose they are on the way ere this.

Am glad to hear your *Cent. Park* is still lovely. Hurricanes spare it.

An amateur fellow came and shot the house and here is a copy. Here too are the babes. Mrs. Muir sends regards and I am ever cordially yours,

JOHN MUIR

The house can't be got into this envelope and must stay at home—its proper place you will say.

Martinez, March 4, 1890

Dear Mr. Johnson,

I went to the city yesterday to seek the illustrations you want. Keith had three paintings of falls in Tuolumne Cañon. I told him they were too large. He will make copies of these in India ink, and copy a fine painting of the Tuolumne Meadows and Mts. Dana and Gibbs; also India ink sketch of two or three other rocks and falls in the big Cañon. He promises to have them ready this week when I will forward. Robinson I could not find. Hill is in Portland, Or. His address is 360 12th St. His son told me that he did not think his father had or could furnish photograph of the painting from Inspiration Pt., though he would have no objection to having it engraved for the *Century* if copy could be found. He referred me to Watkins, who he thought had photographed the painting years ago, but Watkins had no copy left, and could not furnish one; therefore I got one of his photographs from the same point of view (the old Inspiration Point). Neither could I find a photo of the rustic landscape to the eastward from Glacier Point, though it has been photographed, perhaps by Muybridge. You may find it in New York. Instead of this I send you a view from Eagle Point, the highest of the Three Brothers, which I think is the best topographical photograph of the valley and High Sierra above it that has been made. I also send herewith the map of the Yosemite region

made by the Geological Survey. The best there is, though faulty in many places, especially about the Big Tuol. Cañon.

I had already written a general description of the Valley ere your letter reached me, and I will hardly be able to make a new beginning. I think, however, that you will find points and cleavage planes running through the mass of the article making it separable into tolerably well-defined sections. And what you want you may print in any order you choose, and what you do not want you can return. The whole will, I fear, considerably exceed the bounds of a single article, while I can't make a sketchy topographical view telling. Anyhow, I can't learn to skip well from point to point like a linnet in a cherry orchard pecking here and there at the best clusters. I'll do the best I can, however, keeping the objects you mention in view, while I browse with blunt muzzle on fruit, wood, root, or leaves.

Kate's letter to Stanford is a stunner. I suppose you saw the Governor's long telegram to Stanford in reply. None of the papers here seem willing to take up the subject in earnest. Here is a feeble editorial from the *Bulletin*. The extract from the N. Y. *Post* you mention has not yet come to hand. If I like it I will try to get it republished in the *Bulletin*, but I don't know how Mr. Fitch may look at the matter. I have not yet had a talk with him. The love of Nature among Californians is desperately moderate, consuming enthusiasm almost wholly unknown. Long ago I gave up the floor of Yosemite as a garden, and looked only to the rough taluses and inaccessible or hidden benches and recesses of the walls. All the flowers are wall-flowers now. Not only in Yosemite but to a great extent throughout the length and breadth of the Sierra. Still the Sierra flora is not yet beyond redemption and much may be done by the movement you are making.

As to the management, it should, I think, be taken wholly out of the Governor's hands. The office changes too often and must always be more or less mixed with politics in its bearing upon appointments for the Valley/A commission consisting of the President of the University, the President of the State board of Agriculture, and the President of the Mechanics Institute would, I think, be a vast improvement on the present Commission. Perhaps one of the Commissioners should be an Army officer. Such change would not be likely, as far as I can see, to provoke any formidable opposition on the part of Californians in general. Taking back the Valley

on the part of the Government would probably be a troublesome job. I was talking with Miss [Millicent] Shinn on the subject. She said that in her opinion a bill recalling the Grant on account of mismanagement or any other account could never be got through Congress, because California being about evenly divided between Republicans and Democrats—what names to write after considering the lilies—both parties in Congress would be afraid to offend her. Everybody I have spoken to on the subject sees the necessity of a change, however, in the management, and would favor such a commission as I have suggested. For my part, I should rather see the Valley in the hands of the general Government, but how glorious a storm of growls and howls would rend our sunny skies, bursting forth from every paper in the state, at the outrage of the *Century* Editor snatching with unholy hands, etc., the diadem from California's brow, etc.' Then, where, Oh, where, would be the supineness of which you speak? These Californians now sleeping in apathy, caring only for what "pays," would then blaze up as did the devil when touched by Ithuriel's spear. A man may not appreciate his wife, but let her daddie try to take her back!

I don't know whether the legislature is in session or not—I rather think not, as I have not noticed any Sacramento drift in the newspapers lately.

As to the extension of the Grant, the more we can get into it the better. It should at least comprehend all the basins of the streams that pour into the Valley. No great opposition would be encountered in gaining this much, as few interests are involved of antagonistic character. On the upper Merced waters there are no mines or settlements of any sort, though some few land claims have been established. These would be easily extinguished by purchase. All the basins drained into Yosemite are really a part of the Valley as their streams are a part of the Merced. Cut off from its branches, Yosemite is only a stump. However gnarly and picturesque, no tree that is beheaded looks well. But like ants creeping in the furrows of the bark, few of all the visitors to the Valley see more than the stump, and but little of that. To preserve the Valley and leave all its related rocks, waters, forests to fire and sheep and lumbermen is like keeping the grand hall of entrance of a palace for royalty, while all the other apartments from cellar to dome are given up to the common or uncommon uses of industry—butcher shops, vegetable

stalls, liquor saloons, lumber yards, etc. But even the one main hall has a hog pen in the middle of the floor, and the whole concern seems hopeless as far as destruction and desecration can go. Some of that stink I'm afraid has got into the pores of the rocks even. Perhaps it was the oncoming shadow of this desecration that caused the great flood and the earthquake—"Nature sighing through all her works giving sign of woe that all was lost." Still, something may be done after all. The boundary line I have indicated on the map in dotted line as proposed above. A yet greater extension I have marked on the same map extending north and south between Lat. 38° and $37^{\circ} 30'$ and from the axis of the range westward about 36 or 40 miles. This would include three groves of Big Trees, the Tuolumne Cañon, Tuolumne Meadows, and Hetch Hetchy Valley. So large an extension would of course meet more opposition. Its boundary lines would not be nearly so natural. While to the westward many claims would be encountered; a few also about Mts. Dana and Warren where mines have been opened."

Come on out here and take another look at the Cañon. The earthquake taluses are all smooth now and the chaparral is buried, while the river still tosses its crystal arches aloft and the ouzel sings. We would be sure to see some fine avalanches. Come on. I'll go if you will, leaving ranch, reservations, Congress bills, *Century* articles, and all other terrestrial cares and particles. In the meantime I am cordially yours,

JOHN MUIR

Martinez, April 19, 1890

My dear Mr. Johnson,

I hope you have not been put to trouble by the delay of that MS. I have been interrupted a thousand times while writing by coughs, grips, business, etc. I suppose you will have to divide the article. I will write a sketch of the Tuolumne Cañon and Kings River Yosemite, also the charming Yosemite of the Middle Fork of Kings River. All of which may, I think, be got into one article of 10,000 words or so. If you want more than is contained in the MS. sent you on the peaks and glaciers to the east of Yosemite, let me know and I will try to give what is wanted with the Tuolumne Cañon.

The Yosemite *Century* leaven is working finely, even thus far, throughout California.^a I enclose a few clippings. The *Bulletin* printed the whole of Mack's *Times* letter on our honest Governor

[Robert W. Waterman]. [Charles Howard] Shinn says that the *Overland* is going out into the battle henceforth in full armor. The *Evening Post* editorial, which I received last night and have just read, is a good one and I will try to have it reprinted. I saw Robinson yesterday. He says that the three sketches I ordered for you of the Cathedral Peak and Hetch Hetchy were almost done and would be forwarded at once. I thought they had been sent on weeks ago and fear they will now be too late should you conclude to print H. H. in the first section. He feels very sore concerning the references to his *Examiner* letters by [George G.] Mackenzie as being stupid, blundering, senseless, etc. He says that most of the objectionable features of the letters were added by the editor of the *Examiner* to suit their sensational purposes, etc. He is very anxious to be heard on the Yosemite question and offers to write something and submit it to me to show how smooth and dispassionate he can be, allowing me to change as much as I judge might be best. If he sends me anything that seems available I shall forward it to you in hope of your finding something useful in it and getting it published, somewhere. I tried to soothe him by saying that it mattered little who did the writing so long as it was well done and was effective in saving the pines and ferns, etc., but he evidently thought he would like to be a general in the war. He deserves credit for an almost diabolical industry. Mr. Olmsted's paper was I thought a little soft in some places but all the more telling I suppose in some directions." Kate like fate has been going for the Governor and I fancy he must be dead or at least paralyzed ere this. How fares the bill Vandever? I hope you gained all the basin—if you have, then a thousand trees and flowers will rise up and call you Blessed, besides the other mountain people and the usual "unborn generations," etc. In the meantime, for what you have already done, I send you a reasonable number of Yosemite thanks, and remain very truly your friend,

JOHN MUIR

Robinson is fretting about his photos. He wants them back.

Martinez, April 20, 1890

Dear Mr. Johnson,

I have just received yours of the 14th and make haste to answer it. I don't like Mack's last *Times* letter at all. The truth is, unless

I am very much mistaken, he is with the adversary as an attorney. As long as he was dealing in generalities, looking forward to what the present Yo. management wanted most of all, the extension of the grant, he did well. But as I knew all along that he was with the Washburns or R. R. Co. I have been watching sharply for him to show his hand, as the gamblers say, and he has shown it in this letter opposing the Vandever Bill. What he wants, and what the Stage and Hotel Co. want, and the R. R. Co. want, seems to me from Mack's letter to be just this: Let the grant be extended under promise of reformation of the management, and let the present management be their own reformers. The legislature meets next year, Mack tells us, and will be sure to grant any desired reformation of the "wicked sinful management." This may sound well in the East, but we know here that whatsoever the R. R. Co. and Stage Co. want, that will the legislature controlled by Boss Buckley do. Hence, as I have said, they will be their own reformers. As for the reservation being controlled by the Federal Government, this is of all things what the present management most dread. In the *Alta* clipping I sent you yesterday you will see that Irish has already commenced to combat this possibility by declaiming against imaginary vandalism in Yellowstone Park under Federal management. Federal control outside and state control inside would, says Mack, "lead to sure and endless confusion in the arrangements for the transportation and other accommodation of visitors"—that is, for the Stage Co. and Hotel Co. monopoly. Wouldn't suit Washburn & Co. The whole letter is a mere jingling, juggling mass of words, in which a vain attempt is made to hide his motives, while seeking to secure both the Valley and its surrounding region to the present Company as a monopoly. What the present Company is to gain by the extension of the grant I can only guess in part. Washburn & Co. built a road into the Valley from Wawona, and last year they made out to sell that portion of it that lies within the Yo. Grant to the Commission for a large sum—\$10,000, I think. Should the grant be extended they would probably sell the rest of it for \$30,000 or more while still retaining control of it. But anyhow, that Mack letter is traitorous, unless I am blundering more than ever before in my life. Stand up for the Vandever Bill and on no account let the extension be under state control if it can possibly be avoided.

You perhaps noticed that in his reply to the Governor's charges Mack skipped the discussion of the Uncle Olmsted part entirely, while elaborating in every other direction.

[*The end of this letter is missing*]

Martinez, May 8, 1890

My dear Mr. Johnson,

I am glad you think Mackenzie is all right and that I am "all off," for he has done good work thus far, though I have not yet seen a word in his letters that could injure the stage and hotel company and saddletrain company. He was working for the Washburns when we saw him and his last letter opposing the Vandever Bill, without good reason as far as I could see, led me to believe he was still working in their interest. What disadvantage would result from the surrounding region being in the hands of the general government I cannot imagine. Nor can I imagine how any change for the better in the Yo. management is to be made by a promise from our legislature that the Valley should be "decently managed." Make the present management promise to be good and take all the Yo. basin under control. While the management has not yet confessed it is bad, a more utterly senseless and worthless column of words could not be gathered together on the subject, and, if honest, the writer must have been what Burns calls "foo." Still, I hope I may be mistaken. I have never heard of the "*Expositor*"—and how that paper can be a "first class means of addressing the people of California," I can't see. I suppose it must be one of the foothill papers of Mariposa or Fresno and its Yo. letters might be copied by the city papers and thus get widely published. Anyhow I'll wait and grumble no more.

I enclose a Robinson letter from the *Examiner*. Very selfish but honest, I think, and calculated to do more good than harm perhaps. He promised to let me see anything he wrote before offering for publication but has not done so, and though I saw him yesterday he did not mention this letter. I also enclose a paragraph from the *Alta* editorial column which is in the right direction.

I saw Sam Miller, the R. R. and Stage Co. agent, yesterday. Also Mr. Cook, the Yo. landlord, and you would have been delighted to see how fine and wide an improvement had taken place in the views of these gentlemen on Yo. management. They both mildly

admitted that "Johnson" had been badly treated by Pix & Irish, and that his plan for expert work in laying out roads, caring for the meadows and young groves, etc., was a good one. Said that they would have no objection to the appointment of Olmsted as landscape gardener if money to pay him were appropriated, etc., etc. They also told me that the Valley was not any longer a horse pasture or hog nursery.

As I have urged over and over again, the Yosemite Reservation ought to include all the Yosemite fountains. They all lie in a compact mass of mountains that are glorious scenery, easily accessible from the grand Yosemite centre, and are not valuable for any other use than the use of beauty. No other interests would suffer by this extension of the boundary. Only the summit peaks along the axis of the range are possibly gold bearing, and not a single valuable mine has yet been discovered in them. Most of the basin is a mass of solid granite that will never be available for agriculture—while its forests ought to be preserved. The Big Tuolumne Meadows should also be included since it forms the central camping ground for the High Sierra adjacent to the Valley. The Tuolumne Cañon is so closely related to the Yosemite region it should also be included, but whether it is or not will not matter much since it lies in rugged rocky security as one of Nature's own reservations.

As to the lower boundary, it should, I think, be extended so far as to include the Big Tree Groves below the Valley, thus bringing under Government protection a section of the forest containing specimens of all the principal trees of the Sierra, and which, if left unprotected, will vanish like snow in summer. Some private claims will have to be bought but the cost will not be great.

Yours truly,

JOHN MUIR

Glad to hear of your brother's success. Am at work on the Cañon.

Martinez, June 9, 1890

My dear Mr. Johnson,

Yours of the 28th received. I am glad the additional Tuolumne material answers your purpose and regret that lack of knowledge on my part has thrown so much patching editorial work on you.

The *Post* editorial is good. I admire your pluck and perseverance

in so worthy a fight as on this and the copyright. "I send a few clippings. Saw Fitch, of the *Bulletin*, the other day and asked him sharply how he could oppose Copyright. He said they had not opposed the bill very much—a mean answer. I suppose the raising of the price of literature is what most publishers fear. The copyright rhyme is good but rather too long. I will try to get it republished.

The *Bulletin* is in favor of extension of the Yo. park—objects only to taking it out of State management—admits that past management has been about as bad as possible. Had a long talk with Fitch on the subject.

Thanks for asking me to name price of Yo. material. What the Century Co. thinks a fair price will be satisfactory to me.

Cordially yours,
JOHN MUIR

NOTES

¹ Muir here refers to the Chinese he employed to pick and cultivate grapes and other fruit in the vineyard and orchard at his Alhambra Valley home, near Martinez.

² Muir was at this time completing his work as editor of "Picturesque California and the Region West of the Rocky Mountains, from Alaska to Mexico," a large illustrated folio issued in parts to subscribers and ultimately bound in two volumes. Although the volumes are dated 1888, they were not completed until 1889. Muir wrote a number of the articles, including "Washington and Puget Sound" and "The Basin of the Columbia River."

³ Referred to by Johnson in "Remembered Yesterdays," p. 290.

⁴ Frank M. Pixley, editor of *The Argonaut*, was a member of the State Board of Commissioners to Manage the Yosemite Valley and the Mariposa Big Tree Grove. John P. Irish was also one of the Commissioners.

⁵ Charles D. Robinson, well-known artist and illustrator of the time. The illustrations for Muir's article "A Rival of the Yosemite" (Kings Canyon), in *The Century*, November 1891, and a number of illustrations in "Picturesque California" were made from Robinson's work.

⁶ James M. Hutchings, a pioneer in Yosemite, author of "Scenes of Wonder and Curiosity in California," 1860, and "In the Heart of the Sierras," 1886.

⁷ Muir was later the moving spirit behind the recession by the State of the Yosemite Valley Grant to the Federal Government, finally consummated in 1906. His prophecy of violent opposition to the transfer turned out to be well founded. See "Yosemite and the Sierra Club," by William E. Colby, in *Sierra Club Bulletin*, 1938, 23:2, pp. 11-19.

⁸The map was published in both of Muir's articles in *The Century*, "The Treasures of the Yosemite" (August 1890), and "Features of the Proposed Yosemite National Park" (September 1890).

⁹Presumably referring to "Open Letters" by George G. Mackenzie, Lucius P. Deming, and Robert Underwood Johnson, in *The Century*, January 1890. The discussion was continued later in *The Century*, September 1890, and November 1891.

¹⁰Frederick Law Olmsted, noted landscape architect who laid out Central Park in New York City, was one of the original Yosemite Valley Commissioners appointed in 1864. He resigned on leaving California in 1867. His son, of the same name, has rendered notable service in planning California's State Park System and, more recently, has generously aided in solving present-day problems in Yosemite Valley.

¹¹Johnson was one of the principal workers in support of the International Copyright Bill which was enacted, after a long fight, in March 1891.

Governmental Preservation of Natural Scenery

BY FREDERICK LAW OLMSTED (Père)

The following open letter printed for circulation by Frederick Law Olmsted, in 1890, is peculiarly appropriate to the subject matter contained in the foregoing letters of John Muir. Muir, as evidenced by passages in his letters, had become thoroughly disgusted with the disgraceful administration of Yosemite Valley by the state commissioners who were political appointees and rarely selected because of any qualification to care for the Valley. Muir pointed out these shortcomings when he took Johnson on the Yosemite trip, and Johnson returned east convinced that something ought to be done to improve conditions. Johnson's open criticism of the state management started a long-lasting feud between him and Muir, on the one hand, and John P. Irish, a Yosemite Valley Commissioner, and Frank Pixley, editor of the San Francisco Argonaut, on the other. Muir mentions this in one of his letters. The Olmsted letter was inspired by Johnson's appeal to him for aid. This was all a part of the movement which culminated in the recession of Yosemite Valley to the federal government when it became a part of the great national park surrounding it and in which recession the Sierra Club, led by Muir and Johnson, played so prominent a part. WILLIAM E. COLBY

IN a communication that has been given to the public from the Governor of California to the Senators and Representatives in Congress of that State, I am surprised to find my name introduced in a manner that compels me to make the following statement.

In the year 1864, being then a citizen of California, I had the honor to be made chairman of the first Yosemite Commission, and in that capacity to take possession of the Valley for the State, to organize and direct the survey of it and to be the executive of various measures taken to guard the elements of its scenery from fires, trespassers and abuse. In the performance of these duties, I visited the Valley frequently, established a permanent camp in it

and virtually acted as its superintendent. It was then to be reached from the nearest village only by a sixty mile journey in the saddle, and there were many more Indians in it than white men. The office had come to me unexpectedly and in a manner that earned my devotion. So far from a salary coming with it, it was an affair of considerable cost to me, which I have not asked to be reimbursed. Moving out of the State in the autumn of 1867, I presented my resignation of the office, which was accepted by the Governor with expressions of regret and gratitude.

I have not been in the Valley since; but because of some knowledge of this pioneer duty of mine, travelers returning from it have often told me of what they thought missteps in its administration. I have never expressed an opinion on the subject. These travelers have also now and then urged that some proceeding should be taken to expositulate with the State against the manner in which it was believed by them to be abusing its trust. I have always declined to move, or take part in any movement, for the purpose.

Several years ago, one of the editorial staff of the *Century Magazine*, Mr. R. U. Johnson, called on me with a letter of introduction. In the conversation that ensued, the subject came up of the danger to treasures of natural scenery that is more and more growing out of modern developments of commerce and modern habits of travel. The thought came to the surface that with reference to this danger, a sentiment needs to be cultivated such as would appear in any crisis threatening a national treasure of art. I do not remember that the Yosemite was referred to, but it followed from the conversation that I wrote a short paper, afterwards published in the *Century*, upon the duty of towns to guard for their future people eminently valuable passages of scenery near them, and in this paper the Yosemite was mentioned; but not reproachfully to the Commissioners.

Last summer I received a second call from Mr. Johnson. He had just returned from the Yosemite, and his object was to invite me to prepare an article upon it. I declined, giving as one reason for doing so that I could not properly write on the subject without making a prolonged personal examination of the present condition of the Valley and investigating the grounds of the complaints made by travelers as to the management of it. I was then asked if I would undertake to make such an examination and investigation at a

suitable professional compensation from the Magazine, taking with me an accomplished artist to prepare illustrations for the desired article. I was loth to decline so liberal a proposition, but concluded that I must in justice to my existing professional engagements.

Mr. Johnson then said that he would be obliged to write upon it himself, and thereupon mentioned several points upon which he desired my opinion. One was in regard to a proposition which I understood to involve the systematic cutting out of all young trees in the Valley. He asked what I thought of it. A proper system of management for woods valued because of their effect in scenery, must be directed as much to the renewal and perpetuation of the constituent trees as to anything else; a common rule being that for every hundred or thousand trees going off, there shall be a hundred or a thousand more, advancing, to take their place. To provide against accidents, and in order that the replacing trees shall be of choice quality, a much larger number of young trees are kept growing, those not selected to remain because of their choiceness being gradually thinned out. A systematic removal of all the young trees of the Valley would be equivalent to the destruction, in course of time, of just what the State of California stands voluntarily pledged to "*hold, inalienably, for all time.*" That is to say, the distinctive charm of the scenery of the Yosemite does not depend, as it is a vulgar blunder to suppose, on the greatness of its walls and the length of its little early summer cascades; the height of certain of its trees, the reflections in its pools, and such other matters as can be entered in statistical tables, pointed out by guides and represented within picture frames. So far, perhaps, as can be told in a few words, it lies in the rare association with the grandeur of its rocky elements, of brooks flowing quietly through the ferny and bosky glades of very beautifully disposed great bodies, groups and clusters of trees. In this respect, its charm is greater than that of any other scenery that, with much searching, I have found. There is nothing in the least like it in the canyon of the Colorado, sometimes foolishly compared with the Yosemite. I felt the charm of the Yosemite much more at the end of a week than at the end of a day, much more after six weeks when the cascades were nearly dry, than after one week, and when, after having been in it, off and on, several months, I was going out, I said, "I have not yet half taken it in." To the perpetuation of this

charm nothing is more essential than the constant renewal of its wood. There will always be danger that fire will too much interfere with what it is necessary to provide in this respect.

These views having been for years fixed in my mind, to Mr. Johnson's inquiry I replied, that to carry out such a rule as he said had been advocated, would be "a calamity to the civilized world." I remember that I said this because he introduced the phrase in what he afterwards wrote, and this has been my sole contribution, hitherto, to the agitation of the subject. It did not occur to me at the time, nor do I think now, that Mr. Johnson was trying to "make a case" against the State. His questions were such as would be asked by any intelligent man of one known to have given many years of serious and business-like study to a subject about which the inquirer was preparing to address the public. To me he only seemed patient and pains-taking, just and loyal in the performance of a not at all pleasing duty. He was apparently seeking to avoid injustice to the Commissioners whom I judged that he regarded as honest and well-meaning men. He distinctly agreed with me in discrediting much that had been charged against them. He spoke disrespectfully of no one of them, but showed, I think, that he had an impression that, as a body, they had taken a narrow, short-sighted and market-place view of the duty of the State in the premises.

I have thus shown all that I have had to do with the matter, and all that I know concerning Mr. Johnson's motives and methods. I believe that the latter were simple, honorable, public-spirited and perfectly in character with the distinguished high tone of the Magazine he represents. The Governor has been led to state in an official paper, given to the world, that Mr. Johnson is my nephew, and that all he wanted in this business was to bulldoze the Commissioners into giving me employment, as to the latter of which delusions I may say that I have never been so unfortunate as to need to solicit public employment, or to have any one solicit it for me.

After the above narration, may I not suggest that if the attitude of the State of California toward the trust it accepted in 1864, from the Nation, were what it ought to be, its Governor would hardly have missed the point of the remonstrance of the *Century*, so completely as his letter indicates that he has.

That remonstrance points to nothing in the methods of the Com-

missioners that would be objectionable if the concern of the Nation in the matter were of the same kind that it is with the State's dealings with mineral deposits, irrigation, militia, schools, railroads, or even forests. If the Governor and the Commissioners are in error, their error probably lies not in any intentional disregard of the State's obligation, but in overlooking the fact that in natural scenery that which is of essential value lies in conditions of a character not to be exactly described and made the subject of specific injunctions in an Act of Congress, and not to be perfectly discriminated without other wisdom than that which is gained in schools and colleges, counting-rooms and banks. Such qualities as are attributed by the Governor to his Commissioners—integrity, general education, business experience and what is comprehensively called good taste—do not, in themselves, qualify men to guard against the waste of such essential value, much less do they fit them to devise with artistic refinement means for reconciling with its preservation, its development and its exhibition, such requirements of convenience for multitudes of travelers as must be provided in the Yosemite. Whether it is the case with these Commissioners or not, there are thousands of such estimable men who have no more sense in this respect than children, and it must be said that those most wanting in it are those least conscious of the want. Men of the qualifications attributed to the Commissioners are the best sort of men for the proper duties of an auditing and controlling board. There could be no better men for the usual business of a board of hospital trustees, for example. But the best board of hospital trustees would commit what the law regards as a crime, if they assumed the duties of physicians and nurses. Ability in a landscape *designer* is, in some small degree, a native endowment, but much more it is a matter of penetrative study, discipline, training, and the development through practice of a special knack. Even men of unusually happy endowment and education, who have not, also, the results of considerable working experience, can rarely have much forecasting realization of the manner in which charm of scenery is to be affected by such operations as commonly pass under the name of "improvements."

I should say no more had I not observed in a California publication on the subject an assumption that a professional field-student of that which constitutes the charm of natural scenery would be more inclined than other men to crowd the Yosemite with "artifi-

cialities." Its error may be shown by quoting the advice, given several years ago, by the Landscape Architects employed by the State of New York to outline a plan for the restoration, preservation, development and exhibition, of the scenery of Niagara Falls. The paragraph which follows was the only italicized passage in their report, this distinction meaning that they regarded the principle stated as the corner stone of their work.

"Having regard to the enjoyment of natural scenery, and considering that the means of making this enjoyment available to large numbers will unavoidably lessen the extent and value of the primary elements of natural scenery, nothing of an artificial character should be allowed a place on the property, no matter how valuable it might be under other circumstances, and no matter at how little cost it may be had, the presence of which can be avoided consistently with the provision of necessary conditions for making the enjoyment of the natural scenery available."

FREDERICK LAW OLNSTED

BROOKLINE, MASS., 8th March, 1890.

El Volcan, Parícutin

By WALTON A. WICKETT

IT was in 1883 that Krakatoa in a fiery rage lost its head, or better, blew its top, on one of the islands of the Dutch East Indies. In 1912 Mount Katmai did the same thing when "The Valley of Ten Thousand Smokes" came into being on the Alaska Peninsula. Only recently has famous Mount Vesuvius exploded, the intensity of its eruption rivalling that which destroyed Herculaneum and Pompeii so many years ago.

By comparison the little wisp of smoke that on February 20, 1943, emerged from the furrow of a new-ploughed field not far from the then-flourishing village of Parícutin* in the state of Michoacán, Mexico, is insignificant. This basis of comparison, however, neglects an important distinction; for the now-much-publicized volcano, which takes its name of Parícutin from the town which it has partially buried, did not exist prior to February 20, was no more than an occasional rumble deep in the earth before that fateful day, whereas Katmai, Krakatoa, and Vesuvius have histories that are antediluvian.

The story of the birth of Parícutin has already been told countless times; indeed, one spectacular and highly unreliable account not long ago appeared in a Sunday comic section. What the true facts are one cannot say, for an occurrence so extraordinary attains amplification with each successive telling, and I doubt that at this late date one could obtain an absolutely accurate picture even by talking with the man who was there at the very start. Here, however, are the details of Parícutin's origin as provided by my guide, Reuben, a person of more than average education, speaking Spanish, Tarascan, and English. He was at the volcano on the fourth day following its inception; there to act as interpreter between the press and the Indian farmer on whose property the eruption began.

Up until early 1943, out in the further reaches of the state of Michoacán, perhaps 200 kilometers inland from the Pacific Ocean and four degrees below the Tropic of Cancer, there lay a small

*Colloquially, the accent is on the last syllable, but we have followed the more precise form found in official Mexican publications.—Editor.

and isolated section of land, composed of fertile fields and meadows surrounded by heavily wooded, individual peaks projecting upwards not more than 300 meters above the plain. Each of these had at one time been an active volcano, but that was from one thousand to ten thousand or more years ago. These fields were cultivated by the Tarascan Indians who lived in the village of Parícutin or in the neighboring towns of Parangaricutiro and Parangaricutirimicuaró. Some of the Indians owned the property outright; for among the Tarascans there are a few who belong to the landed gentry, including one young man named Pablo. He was a graduate of the University of California, now returned to Michoacán with the revolutionary and very significant idea of education for everyone. Most of the Indians, however, farm the land for wealthy landowners (those whose haciendas were not split up and the land parceled out to the local people during the Cardenas regime), and these landowners live away from the land in luxurious homes by the sea or in Mexico City.

Perhaps it was to continue the process which Cardenas had begun, to bring the land still farther back to Nature, that the volcano came into being. On February 20, a certain Tarascan of the village of Parícutin, one Dionisio Pulido, was ploughing his field of maize, ploughing with a slight uneasiness, for during that day and those preceding there had been numerous earthquakes to startle the citizenry and send more and more of them over to the rather magnificent church at Parangaricutiro to confess their sins and to pray.

Apparently the praying had been insufficient, Dionisio concluded, when from the center of his field he beheld a column of smoke curling upwards. Then, momentarily rationalizing, he decided the burning of excess pitch in a turpentine forest nearby must somehow be responsible for the strange phenomenon. Little realizing that on him was about to be visited a black fury far more dreadful and far more devastating than any mere pestilence or drought or plague that he had hitherto known, he went over to the crack from which the smoke emerged and filled it with earth. He had just returned to his plough when the earth again spread apart, and more smoke puffed out accompanied by tongues of flame. Without further hesitation this time he took to his heels, raced towards Parícutin some two kilometers away, not daring to look back. Finally, exhausted, he bowed down, prayed fervently, and made some markings with his

finger on the ground. Then he was able to look about him. The world had not come to an end; the fire was not pursuing him. But fire was still in his field; the earth was rumbling, and a fountain of small rocks was commencing to play. Dionisio ran on to Parícutin and from there to Parangaricutiro where he told the *presidente* of the church what had happened. Such is the story told by my guide, Reuben.

Where the oxen ran is not recorded; it is to be hoped that they did not remain in the field, for shortly after Dionisio's departure, there occurred a violent explosion whose shock was felt as far away as Mexico City. Boulders as big as an automobile were now hurled skyward. By the following day, a cone 30 meters high occupied the cornfield. Soon Parícutin had become a geologist's paradise. A small shack, moved frequently since, was erected, from which scientific observations could be made. Representatives from the Smithsonian Institution, from the American Museum of Natural History, and from the United States Coast and Geodetic Survey made the arduous trip to the scene of activity. Asked by the terrified townspeople when the volcano would die, they replied in the true spirit of the geologist that no definite statement was possible, that activity might cease tomorrow or that then again it might go on for several years.

A national magazine, editorializing a little, presumably to prevent Parícutin's becoming too great a tourist attraction in time of war, spoke of the volcano as if it were a pimple, a small thing of no account, soon to be forgotten. Judging from the height of the other volcanic peaks in the vicinity, the editors showed that they had given the matter a little thought. For compared to such cones as Citlaltépetl (Orizaba) and Popocatepetl, both of them over 5,400 meters and both many miles away, these were small, and it was reasonable that Parícutin would be likewise.

But as the people speculated, Parícutin grew. From a wisp of smoke in a level valley, it had attained a height of 300 meters by the first of June, almost as high as the Empire State Building. Lava crept out from a crack in the side, a moving wall of hot, contorted rock, six meters or more in thickness, which, traveling at a speed of two meters an hour like a huge ocean breaker in slow motion, engulfed everything in its path. In the city of Uruapan, thirty kilometers away by direct line, sand fell—heavy black sand that blotted out the sun and filled the eyes of the inhabitants. The lacquer

industry which normally flourishes there lay dormant necessarily. July arrived, and the people of Parícutin found that the lava flow had reached their backyard. An orderly evacuation of the inhabitants was begun, the government sending them to a village south of Uruapan and establishing them upon new land. Fitful winds, mixtures of convection currents and orthodox gales, blew the sulphurous and chloride vapours westward against neighboring Tancítaro, a mammoth irregular cone of another epoch. The trees shriveled and died, the undergrowth was buried under a mantle of gray dust, and now the mountain side is a haunting spectacle of bare and bristling trunks and branches.

Neighboring Parangaricutiro has been under a steady shower of sand. Except for a tall, tired pine in front of the church, practically nothing grows there anymore; the fields, once green with corn, are black stretches, barren, flat, and dull until the wind blows, when they assume a fury all their own. Farther away, towards Uruapan, the depth of the sand is a few centimeters. Here corn still stands, but the stalks are dried, and the trees are denuded at the top; for the sand has collected there in the night and morning to be washed down by the afternoon rains, taking with it leaves and twigs.

By October 19, Parícutin had reached a height of 500 meters. Not only had it filled the valley between two old craters, but against one of them the lava had piled up in an ugly heap to the extent that the former crater has now become merely a part of the slope of Parícutin. Excluding Tancítaro, the volcano stood higher than any of the peaks in the vicinity and showed no signs of ceasing its activity. But Nature, even in its most violent forms, is governed by physical laws. As Parícutin grew, the greater became the internal pressure at its base, or, as the Romans would have said, the bigger the job for Vulcan. And since that god's celestial qualities include a lazy streak, it was logical that he tunnel sideways, breaching a part of the slope near the base from which to eject fire and rock and glassy slag. This done, the main cone could serve a secondary purpose, providing a vent for clouds of smoke, or, more properly, plumes of vapours and rock particles; for the amount of actual combustion—from which smoke results—is negligible.

Such was the situation as I beheld it on December 4, 1943. Parícutin by then had become a major tourist attraction. A new road,

quite an improvement on the old, although still worse than is possible to imagine, had been constructed from Uruapan to Parangaricutiro, enabling approximately a hundred people a day to make the tiresome two-hour journey. One can engage a private car or go by crowded bus, as I did. I lingered at Parangaricutiro no longer than necessary to get my bearings. While most of the tourists engaged horses, I chose to make the three-kilometer trip to the crater on foot. A small Indian boy elected to go with me, a very accommodating urchin, his face besmirched, who replied "si" to everything I said. For over an hour we wallowed in deep sand, at length arriving at the observation house. This was simply a shack provided with a rail to which the horses were tied, a counter where one can obtain ubiquitous Coca-Cola at night club prices, and several sheltered benches. My friend and I passed the observation house, walked along the rim of the extinct crater against which Paricutin had obtruded itself, descended a score of meters into a declivity so full of vapours that sight was difficult and where the surrounding rocks were too hot to touch, and found ourselves at last upon the virgin slopes of a new volcano. We drew up so close to the crater of the small active cone, newly sprung from the side of the original, that fragments of pumice, vesicular volcanic glass the size and appearance of dried apricots, floated down upon us. We were walking on top of a red hot lava flow, which moved slightly beneath us, though not perceptibly, and my Indian boy was barefoot; but such is the insulating quality of the glass that the layer which it formed kept the heat away, although one need dig down only a foot to reach burning temperatures or merely touch a fumarole that vents the lava and thereby scorch one's feet.

Explosions within the crater occurred at the rate of several a second, and with each one a shower of glass or slag was thrown up—red hot twisting filaments of all shapes and sizes, looking like flopping doormats, mops, kitchen ware, and about anything else that one would care to imagine up to the size of the kitchen stove. The noise was like that of the timpani in Stravinsky's "Rites of Spring," which piece, as a matter of fact, was used most effectively as a sound background in Walt Disney's *Fantasia* wherein the creation of earth is depicted. However, here at Paricutin the explosions were more intense, and we could feel their weight upon our chests. Every so often a very thin band of light, only faintly visible, would

emerge from the crater, expanding outwards across the sky in the shape of a rapidly moving arc. Then would follow a great boom. This, I believe, was a shock wave, similar to that which one sees when a blast of dynamite explodes and the air is already smoke-laden. It is merely a rarefaction or condensation which makes itself visible by a progressive disturbance of the suspended dust particles.

Leaving my boy, who felt it would be unwise to tempt the Monster further and who, by some abstruse mathematical reasoning, had not only decided but had convinced me that a substantial tip was due him, I commenced the climb up the major caldera. Its surface was a blanket of wet, black sand interspersed with dry sections of pebbles and occasional hot stretches out of which steam seeped and which were encrusted with minerals. Later, I was told that these had recently been smoke vents and that the vapours which they had poured forth had been of sufficient opacity to hide the crater completely.

The going was not easy, the slope being steep—slightly more than 30 degrees, and the ground slipped back as I went up. Soon I was at an elevation above that of the top of the small active cone, and presently I was able to look down into the fiery throat. What a jumble of red hot fragments was there! But then, suddenly, and for the first time in two days, the eruption of pumice ceased, the explosions stopped, and dark, dense, billowing plumes unwound themselves upwards, leaving streamers of settling sand as they drifted away, fortunately not in my direction. Replacing the roar of the explosions there was a swishing sound like wind through leaves. More startling, from up above, atop the mountain I was ascending, came another noise like hail on a tin roof. Overhead the sky darkened, and then the reason for the hail sound became apparent, as pebbles the size of tennis balls, composed of hard, heavy rock rolled downwards on all sides of me. One hears that it is a mistake to run downhill, particularly when the depth to which the feet will sink is unpredictable; but here the hastiest possible retreat, even if ungraceful, was my one concern.

Down where the slope began to level off I had a chance to examine my surroundings while removing a good part of the volcano from both shoes. Here at the change of slope had accumulated a vast number of these pebbles, some as large as basketballs. These must have been ejected within the last few days; for sand had not

yet covered them, and it was but a few days previous that the big cone had belched forth sand in such quantities that lights in far off Uruapan had to be turned on during mid-day.

They offered fair proof of Parícutin's treacherous qualities. Something would momentarily plug up the little cone, and the subterranean plumbing was such that the big one would start to erupt, not to the point where it would throw out red hot scoria, but simply such that it would push up a few cold, dense boulders that had gathered in its throat, supplementing this discharge with much black sand. Perhaps this was why no one had yet climbed to the summit and why the two boys from California were regarded as "crazy americanos" when earlier the same day they had walked along the side of Parícutin between the fiery cone and its parent. No one had hitherto ventured so close.

But the pebbles stopped rolling, and presently the little cone, called by the Indians "Zapido," meaning "small boy," cleared its throat with a very mature and tremendous explosion as it turned again to productive effort. Gathering fortitude, I started the climb once more, this time reaching the summit. It was late afternoon. The top consisted of a saucer-shaped plateau with the opening in the far center. Holding my breath to avoid choking on the vapours of sulphur dioxide that crept up from the old smoke vent on the side, rubbing my eyes to keep the tears away, I looked down into an ugly, fuming pit. There was no fire here, only black pebbles slightly bigger than my fist, which bounded up in the air like so much pop corn, reaching the top of their trajectory just below the level of the lip.

I bobbed my head around, seeking a clear space in the steam through which to snap a photograph; I crept close to the ground. For a brief moment, I had the wild idea to move down into the saucer to the very mouth itself; but lack of faith in the ominous, bounding pebbles kept me back. Just a slight increase in the volume of the escaping gas and they would be carried so much higher, some of them veering off sideways, coming down upon the saucer. A greater increase and they would commence to roll down the side of the cone as they had already done that afternoon. Indeed, they might give way to boulders. The thought loomed larger as I mulled the matter over; moreover, I had the sensation that the corrosive gases were causing my dental work quietly to dissolve.

One hears talk occasionally to the effect that the ideal end would consist of a leap into an active crater wherein cremation would be instantaneous and absolute, and where one could be quite sure of a lofty ascension, body and soul, to somewhat more temperate realms. It is safe to say, however, that few can speak from experience; my own opinion is that there are other forms of demise more desirable. This will explain my second and final hasty retreat, a retreat that was accompanied by a veritable shower of black sand. I chose to regard the dry deluge as a manifestation of personal contempt on the part of Parícutin for me. Later, when the sand had worked itself insidiously under my belt and abrasion had begun, I decided that "contempt" was but a euphemism. Small wonder that the planes of Pan American Airway's Mexican subsidiary no longer fly over the crater so that the passengers may enjoy the view. Even at high altitudes the sand grains find their way into the carburetors and the cylinders, providing many a headache for the maintenance mechanics at the end of the line.

Digressing momentarily, I may say that not having a plane flying overhead is much pleasanter for the mountaineer. There is little that is more exasperating than to have scaled a lofty, difficult summit, to stand there feeling like lord and ruler of all that lies below, and then to hear overhead the roar of an engine, and, looking upward, behold an airplane flying past so easily and indifferently. Now that we are in the Air Age, the only surety against a plane's not interfering with the glory is to climb an active volcano.

Certainly there was nothing to impair the satisfaction that I felt. Back at the observation point where the horses were stationed, a crowd of fifty or more people had gathered to watch the evening fireworks. They greeted my return with some commotion. In spite of the bandana around my head, camera over the shoulder, bulky altimeter, lightmeter, compass, and thermometer at the side, and dirt on an unshaved face, which made me look like the "man from Mars," Reuben, my guide of the day before, gave me a Latin American *abrazo*. The *abrazo* is closely related to the double bear hug in act and is therefore startling to the neophyte, but in meaning it corresponds with our handshake. It was Reuben's method of congratulating the first man (so he said) to have climbed to the top of Parícutin. The Head of the Bureau of Reclamation for the state of Michoacán showed me a sketch he had made of the ascent. Others

bombarded me with questions ranging from what the elevation was at the top of the volcano to the type of weather we have in San Francisco. For a few brief moments I tasted the hollow glory of being a cynosure, a gustatory delight; but as darkness fell, everyone's interest, including my own, turned towards the magnificent spectacle out in front of us.

Here, truly, appeared to be what one writer has described as "the greatest show on earth." And yet the size and brightness of this display was but a flicker contrasted to the magnitude of the work being done. Like the sparks from a welder's torch which are incidental to the job of welding, this fire was purely incidental to the job of mountain making. On October 19, when Zapido broke out from the major cone, Parícutin had reached a height of 400 meters. Its angle of slope had remained constant at 31 degrees. With a little high school geometry and trigonometry, one can readily calculate the volume of the mountain corresponding to this height. Then, assuming a specific gravity of 2.5, which is slightly less than that of glass (to take account of the material's being porous), one finds the weight, dividing which by the number of minutes passed since birth gives tons per minute. The answer comes out between 100 and 200 tons, which is no small amount. During the intensive bombing attacks on Germany that commenced last April, as much as 12,000 tons have been dropped per day, corresponding to an average of eight tons per minute. Parícutin is erupting on a scale at least 16 times as grand. If one uses the figure of the Smithsonian Institution of 2,700 tons per minute, a figure that takes account of the tremendous tonnage comprised in the lava flows and the far-flung sand, the difference is that much greater. While I have not paused to make computations, my guess would be that the energy consumed in lifting 2,000 planes with their bomb loads to stratosphere altitudes and in carrying them from England to Germany plus the energy released by the bombs during detonation might be roughly equivalent to the work that Parícutin does in a half day's time.

My own thoughts as I watched the night show were, I recall, sad and moody. This sadness increased as we returned to the village of Parangaricutiro. Someone had procured for me a horse, and as he plodded downwards, I could feel the gloom and desolation pressing in upon me. We passed the lava flow, its moving extremities by then

more than a kilometer away from the volcano proper. Here Reuben had taken me on the previous day to watch the forward edge as it toppled down, the solid blocks making up the surface of the flow some six or more meters in height tumbling onto the disappearing valley floor and exposing in the flow viscous red interiors of stringy texture, looking like taffy or like fresh-poured slag at a smelter dump. The lava may be rich in mineral content, but years and decades will pass before those minerals will actually be made available for the support of plant life. The roofs of Parangaricutiro which have caved in from the weight of sand upon them will have been forgotten and the people, too. And yet I shall never forget the town or its people as I saw them that night. Living for the tourist trade, now their only means of support, the Indians who still remain because they know not where to go and the government has not yet evacuated them, have set up a kind of Ulcer Gulch in the main street. They serve eggs, chicken, enchiladas, tortillas, etc., sprinkled liberally with sand.

It was Sunday night. I went into the church, whose second spire will never be completed, looked at the fine paintings overhead, the massive herring bone floor, the sand swept into neat little piles. I looked at the people, their gaunt faces illuminated by the flickering light from holy candles and from burning pine torches saturated with pitch. Outside in the town square, a feature of all Mexican cities, a band played from an elevated circular dais surrounded by iron grille work. They played without light—all one could see was moving shadows, now and again the glimmer of a straw hat and what showed of white duck trousers beneath the universal Indian serape. The only sounds were the distant explosions of the volcano, the splash of a fountain, the rustle of falling sand, noises from Ulcer Gulch a block or so away, moving people, and the music. In spite of the dissonance of the country band, here was something that warms and has warmed hearts the world over. I doubt that the band knew what it played nor the identity of the composer. But in the playing they linked themselves with millions of others who in hearing the same music have forgotten wars and troubles and the fact that life is not a timeless dream. For what they played that night in dying Parangaricutiro was Johann Strauss' *Wine, Women and Song*.

The Founding of a Ski Club in Bolivia

BY HELEN PATTON

Secretary to Military Attaché, U. S. Embassy, La Paz, Bolivia

THE epic of the founding of the Club Andino Boliviano (Bolivian Andean Ski Club) deserves a special place in the annals of sport as it is the romance of pioneering and vision and heartbreak that we, in this day of express ski-trains, comfortable ski-lifts and beautiful hotels, are not prepared to understand. Seldom is the ski enthusiast in the United States acquainted with sealskins, the most important possession of the true alpine skier, or with the heavy packs that one carries to the regions of eternal snow. At ordinary altitudes these articles have been discarded for the comforts of our modern sports life. Not so in Bolivia. Those were the precious possessions that made the early months of the Club Andino possible—those, but more important still, the vision of one man, Raul Posnansky, who after several years of unending toil and enthusiasm completed the pioneering, and, at the very moment of its realization, died tragically in an avalanche on the slopes of Chacaltya.

Life on the altiplano of Bolivia at 12,000 feet is exceedingly hard, and the superstition has always existed that sports were impossible—to earn a livelihood and stay in good health was all that anyone could expect. So when engineer Raul Posnansky, who had learned to ski in Switzerland, in the early months of 1938 suggested to some of his friends that he felt skiing a possibility, they looked at him askance but agreed to climb to the slopes of Huayna Potosi and the glaciers of Chacaltya to prove how impossible was the idea of skiing at 18,000 feet.

La Paz nestles in one of the numerous gorges that lead off from the altiplano to the lowlands in the east. Roads existed to the rim, but from there the skiers had to go afoot to reach the cordillera some eighteen miles away. The first day they arrived with their heavy packs at the foot of the glacier Chacaltya and pitched their tents in the freezing, rarefied atmosphere. Raul seemed the only one who continued enthusiastically to believe skiing possible. The climb to the top of Chacaltya the following day, even for the sturdy Austrians, Swiss, and Germans, nearly forced their hearts out of

their mouths, and they agreed more strongly than ever that skiing was an impossibility. To their surprise, Raul insisted that he was more convinced than ever that one day they would have a road built to the glacier, a ski-lift and a cabaña (refugio) and all the conveniences of a modern ski club. Thus began the struggle—a struggle for the pure love of the sport without hope of compensation—for hours, months, and years, while he neglected his own brick factory to submerge himself more and more in the completion of his ideas.

The two problems which presented themselves at the beginning were the building of a cabaña, and more important, the laying out of a road. The actual engineering difficulties, though considerable, were as nothing compared to the task of getting enough money to complete a road. All the original members of the Club realized the impossibility of such a road without the help of public funds, and the drama resulting from their diplomatic overtures to the Government is one that could occur in no other part of the world. Only one well-versed in the pattern of Latin politics could understand the promises so easily given by those in power—their political life is usually so short-lived that it is easier to procrastinate and promise but never produce.

Thus began in April of 1939 the building of the first cabaña at the foot of the glacier, one that soon proved to be too small and inadequate for the popularity of the Club. But behind this building, all of which was done by a few members of the Club who gave their weekends and holidays, was the beginning of their political strategy. They realized that congressmen could never be approached with regard to sports as they could be about an ordinary tax bill, as sports have never had the popularity in South America that they hold in the States. So, each weekend while the Club members ascended to Chacaltaya to work on the cabaña they took a congressman or deputy with them to show in actuality the possibilities of sport and the beauty of the place. During the week Posnansky devoted the greatest part of his time to spreading propaganda of the Club, and when the cabaña was finally finished, the Minister of Education, the Minister of Government, and many other influential people climbed to Chacaltaya to see the benediction given by Father Descottes. It wasn't all verbal propaganda—much of it was hard work. The Bolivian Government wished to put a complicated microphone

system in the House of Representatives, and in exchange for political support with the Club Andino bill, one electrical engineer, Alfredo Hendel, worked for three months putting in this system gratis, always lobbying with the congressmen for his sport. The first time the bill was put up it failed, as many who had promised support showed their political instability. But through the untiring efforts of Posnansky, the second time—some two years later—a bill was put through Congress with provisions taxing the ice taken out of the Chacaltaya glacier (refrigeration is almost unheard of in La Paz and ice must be brought down on the backs of llamas), deducting one and one-half per cent of the tax on hotels, and some of the tax placed on liquor served in public places. This would seem like a tremendous revenue for the club, but actually the number of bars and restaurants is very small in Bolivia.

With the finishing of the first cabaña came the necessity of installing a ski-lift, of which there were none in South America at that time. Cable was bought and an old Essex motor was installed in a small shed at the side of the refugio. However, before the motor was installed it had to be carried by hand some three kilometers. This was a backbreaking job as the shale was dangerous and the snow icy. Once it was installed, the members nearly lost their lives in the early trips as the traction method invented by Posnansky necessitated hooks and belts, which they didn't have, and the skiers could not continue to hold on to the cable as it passed over the wheels set at intervals up the glacier. Eventually belts were designed and metal hooks which automatically passed over the old car wheels which they had used.

At this time the tax bill was far from being passed, and the members were anxious to start work on the road. By contributing their own funds and receiving help from the National Committee of Sports they had the money, but this did not solve the labor problem. The Indians refused to work at first, since their superstition would not allow them to step on the snow. So the construction of the road planned by the engineer, De La Motte, a member of the Club, began with the struggle against ignorance as well as against nature. It wasn't an easy road to build, for the mountains are completely made of shale and the road had to be built by hand. Moreover, the ascent was extremely steep and the weather conditions change very rapidly.

Now that the road had been started and the first cabaña was

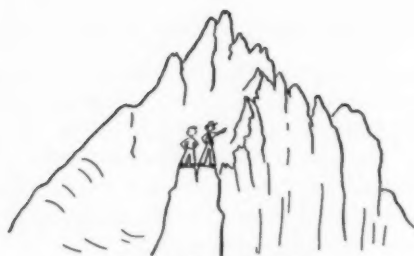
being used, Posnansky began to have visions of a larger cabaña set half way up the glacier where it would look out over the entire glacier, the altiplano, and Lake Titicaca in the distance. Another advantage of such a move would be that the cable for the ski-lift could pass over the roof of the refugio and the operator could see the whole extension of the ski run, immediately stopping the motor in case of danger. As a result, the plans for a beautiful hotel came into being with the help of one of the members, a well-known Bolivian architect. Actually the plan was much too ambitious for the small means of the club, so one small portion was taken as a base and the work was started. It wasn't built the way we would build a house in the States. Scarcity of wood had to be taken into consideration, so the cabaña was built in La Paz, step by step, each piece of plywood or timber (imported Oregon pine) receiving a number. When finished, it was taken apart and the sections carried up in trucks over the road which was rapidly being finished. More disappointments were in store. The workers (*cholos*—that is, mestizos and Indians) had been introduced to the snow and did not object to it as before. But this did not give them honesty, and on many a morning the few club members supervising the work would rise to find that certain numbered pieces had disappeared—sometimes covered with a blanket of snow, but more often gone with one of the workers. As the cabaña neared its completion the new ski-lift was installed, a continuous cable running up the glacier on one side and down over the cabaña on the other. This arrangement can never be a permanent one as the glacier shifts from time to time and crevasses open, necessitating a change in the route of the lift.

Fortunately at this time the eyes of all Bolivia were turned on the Ski Club and propaganda was manufactured as the result of international affairs. In 1941 two German Nazis climbed Illimani, the mother mountain which guards and overshadows La Paz to the south—one of South America's most beautiful peaks, rising to 21,184 feet—and raised the Nazi flag. When two incensed members of the Ski Club, Sr. De La Motte and a young Bolivian, Jesús Torres, decided to climb the mountain to take down the flag, speculation as to their success ran high, as neither had climbed a mountain before and Illimani presented problems even for a good climber. Perhaps the inspiration helped, as they successfully removed the flag and Bolivia lauded them in every paper. Shortly

thereafter the two insistent Nazis began to climb Illimani again. This time they were not successful, and when the public realized that some grave accident had happened, the Ski Club members volunteered to take up the search. Torres and De La Motte once again climbed the mountain, this time to find the bodies of the two German boys, and returned safely. Thus through good sportsmanship the Club came into the public eye.

Crowning the completion of the road and the second cabañia was the International Ski Tournament held in 1943, with Argentina, Chile, and Bolivia participating. Bolivia thus had entered in ski competition with her South American neighbors, and each month does more towards fostering the sport with the youth of Bolivia. It is easy to understand the pioneering that must be done along this line if one realizes that many a Bolivian does not even know what the word "ski" means, and on seeing a pair will ask for what they are used.

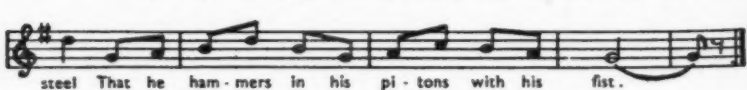
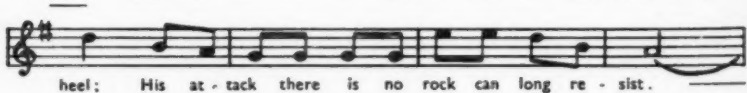
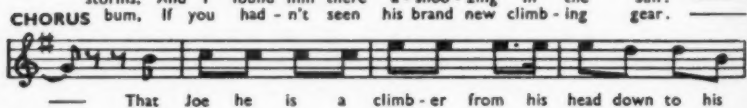
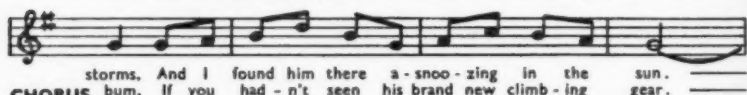
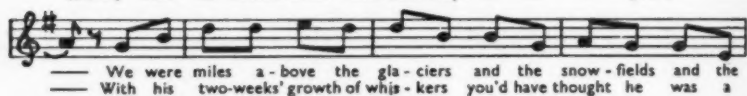
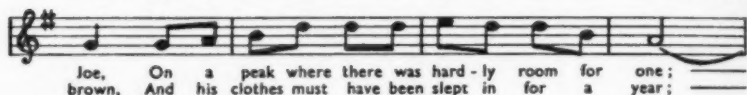
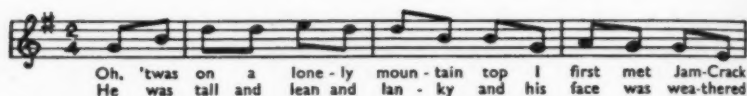
Today through the vision and tireless efforts of a few, Bolivia has acquired the means for this sport and her reputation will no doubt spread to other countries in the next few years.

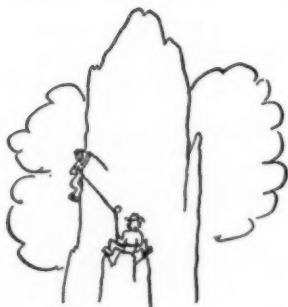


Jam Crack Joe

By "HOOFIN' HERB" CONN

*Reprinted from the POTOMAC APPALACHIAN TRAIL CLUB BULLETIN, January, 1944,
with the addition of decorations by BLANCHE STALLINGS.*





Oh, 'twas on a lonely mountain top I first met Jam Crack Joe,
On a peak where there was hardly room for one;
We were miles above the glaciers and the snowfields and the storms,
And I found him there a-snoozing in the sun.

He was tall and lean and lanky and his face was weathered brown,
And his clothes must have been slept in for a year;
With his two-weeks' growth of whiskers you'd have thought he was a bum
If you hadn't seen his brand new climbing gear.

Oh, he had a first rate climbing rope of fine Italian hemp—
It was hanging 'round his neck just like a wreath;
A bewilderment of hardware was suspended from his belt,
And he held a six-inch piton in his teeth.

As I neared his eyes came open. "By the crags of Teewinot,
You're a climber, too," he said in eager tone.
"Oh, 'tis Fate that crossed our climbing ropes upon this lonely spot,
For 'tis criminal, I'm told, to climb alone."

"Take the load off your tricouni nails and harken to my plan,
If you'd care to join me in a bit of fun.
There's a knife-edge leading west from here to yonder jagged peak—
It's a route, I think, which never has been done."



CHORUS:

*That Joe he is a climber from his head down to his heel;
His attack there is no rock can long resist.
He is so tough and calloused and his muscles steel,
That he hammers in his pitons with his fist*

'Twas already afternoon, but he said we could cross 'ere dark;
I forgot my doubts and tied into his rope.
And his tenor voice boomed loudly in a song of carefree joy,
As my friend belayed me down the summit slope.

You can talk about your monkeys; you can talk about your goats—
You can tell me how they scamper to and fro.
You can tell me of the lizard—how he crawls upon the rock—
But I've never seen the one could equal Joe.

'Twas a privilege to watch him as he eased along behind;
There was magic in his balance, in his stride.
Then the summit was behind us and we stood upon the ridge,
And the mountain fell off sheer on either side.

But ahead a sawtoothed edge of rock leapt jagged into space;
Crossing peak to peak it formed a slender bridge.
'Til the day I make my last rappel beyond that Great Divide,
I will not forget our traverse of that ridge.

CHORUS:

*That Joe he is a climber from his head down to his heel;
His attack there is no rock can long resist.
He is so tough and calloused and his muscles so like steel,
That he hammers in his pitons with his fist.*

As it happened I was leading when we reached the first gendarme—
High above our heads a single rocky fang.
I could find no route around it—both its sides were sheer and smooth—
And above me was a bulging overhang.

"We could try a tension traverse," I suggested to my friend;
But he said, "Oh, no, we have no time for that;
What is more, if we can't handle such a simple bit of rock
Without artificial aid, I'll eat my hat."

He was eager to attempt it, so I let him have the lead;
I belayed him through a piton from the rear.
And I marveled at the confidence with which he started out,
For 'twas not a route ~~worth~~ to pioneer.

Oh, he edged out on the precipice, the slickest doggone wall
Where I've ever seen a human try to go,
With his fingers wedged in crannies and his legs a-dangling free,
And a thousand feet of nothing down below.

CHORUS:

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His attack there is no rock can long resist.
He is so tough and calloused and his muscles so like steel,
That he hammers in his pitons with his fist.*

Then he vanished 'round the corner, and I payed him out the rope,
As I felt him jerk it on from time to time;
And I prayed that I could hold him in event that he should fall.
Then he hollered, and I knew he'd made the climb.

I could hear his cheerful whistling as he drove a piton home;
Then he told me I could climb—it was a walk.
So I tightened up my bowline, and I screwed my nerve up, too,
And unsnapped the carabiner from the rock.

Yet a thousand doubts assailed me as I slid out on the face.
And I tried to find the route where Joe had led.
As I tried his finger traverse, then with certainty I knew
That this was the spot where angels fear to tread.

Oh, I might have stopped to ponder on the life that I had led,
To repent my sins, but now my chance is gone.
I forgot the drop below me—I forgot the angels too—
It took all my concentration hanging on.

How I made that little traverse I will never, never know—
Every step I took I thought would be my last;
Joe was laughing at my efforts, and his chiding spurred me on,
'Til I reached his side, the gendarme safely passed.

CHORUS:

*That Joe he is a climber from his head down to his heel;
His attack there is no rock can long resist.
He is so tough and calloused and his muscles so like steel,
That he hammers in his pitons with his fist.*

So we climbed on as the afternoon slid speedily along;
Oh, a dozen times I thought that we were stuck.
We were still upon the knife-edge with our goal a mile away
When without a warning note the blizzard struck.

Stormy clouds blew out of nowhere and the air was full of sleet;
Icy wind tore at our naked hands and face.
Visibility was zero, but Joe somehow found the way,
And I needed all my strength to match his pace.

There was snow upon our handholds, and our fingers numbed with cold;
There was ice on every foothold where we tread,
As I stretched each foot before me, groping for another hold,
I could only guess at what might lie ahead.

We had covered little distance, through the storm when darkness fell,
And the day turned into black and stormy night.
Oh, my spirits sank within me, but still Joe was up ahead,
Seeming worried not at all about our plight.

I could barely make him out, though he was scarce ten feet away;
He had halted, and he cried for me to come.
I approached, and found, as he had, that the ground dropped sheer below—
Straight beneath was only fog as thick as scum.

CHORUS:

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He is so tough and calloused and his muscles so like steel,
That he hammers in his pitons with his fist*

I was heartily discouraged, but said Joe, "A free rappel
Might well bring us onto solid ground below.
On the other hand it mightn't so we'd best not take the chance;
I will see if, as a climb, the thing will go.

So he rubbed his hands to warm them, and I anchored in the snow,
To provide him with a solid hip belay,
Then he dropped below the edge proclaiming, "There's a jam crack here—
It's the first real climb we've come upon today."

He took several yards of rope, and then his progress downward stopped—
There were problems there with which he could not cope;
For he shouted loud to make me hear above the howling wind,
"It's no go—hang on! I'm falling in the rope."

Oh, I gripped the rope securely as his weight tugged at my hips,
That event my memory never will erase,
For the snow gave 'way around me, crumbling where my feet were propped,
And the rope snapped taut and yanked me into space.

I don't know how far I tumbled, but I landed on my feet
In a snowbank, and my friend was by my side.
We surveyed our situation; we were shaken but unhurt
On a ledge no more than twenty inches wide.

We were fit for no more climbing, so we waited out the night,
Lashed to pitons, fighting just to stay alive.
There we huddled as the freezing wind and snow ripped through our clothes,
And it seemed that morning never would arrive.

CHORUS:

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His attack there is no rock can long resist.
He is so tough and calloused and his muscles so like steel,
That he hammers in his pitons with his fist.*

But at last the day dawned cold, while snow still fell from overhead,
Though the wind had somewhat slackened in its speed.
We were stiff and cold and weary as we started on our way,
And my hopes of getting through were slim indeed.

We rappelled into a saddle; then the way became straight up—
'Twas the farther peak whose top we'd hoped to win.
Up above us was a chimney, gaping open at its base;
"With a courte echelle," said Joe, "I'll put you in."

With my hobnails on his shoulder I could reach a decent hold;
On this rock for moments all my weight I put.
Then I wedged into the chimney, just before the rock came loose—
Hurtling down, the fragment landed on his foot.

For a while I did not realize just how badly he was hurt;
I climbed up to find a good belaying stand.
With my body locked between the chimney walls I held his rope,
And he shinnied up the rope hand-over-hand.

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His attack there is no rock can long resist.
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That he hammers in his pitons with his fist.*

So I led the way until we reached the summit of the peak—
With his arms and one good foot he limped along.
Then the sun broke through the storm clouds, and the fog blew clean away,
And with soaring spirits Joe burst into song.

For an hour we rested on the top; I bandaged up his foot.
We decided I should leave him and go down.
I was far too weak to help him, and the rest would do him good—
I could send a rescue party from the town.

From his rope he made a pillow, and he chewed a piece of snow;
He said happily, "Our traverse now is done.
Oh, I told you we could do it, 'twas a splendid piece of work."
Then I left him there, a-lying in the sun.

Rescue parties never found him, though they scoured the mountainside;
In the snow they found his tracks down from the peak.
But they lost him where the snowbanks petered out on barren rock—
There was nothing more to tell them where to seek.

They supposed that he had slipped and plunged into the gorge below;
But though he's considered dead by other men,
They are wrong, and still I look for him upon each mountain top—
For I know I'll climb with Jam Crack Joe again.

CHORUS:

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His attack there is no rock can long resist.
He is so tough and calloused and his muscles so like steel,
That he hammers in his pitons with his fist.*



Notes and Correspondence

TWO YEARS AT THE HARVEST CAMP

BY CICELY M. CHRISTY

Chairman, Harvest Camp Committee

The pleasant experiences of the week-end harvesting parties of 1942 encouraged the San Francisco Bay Chapter to venture farther into the field of food conservation during the fall of 1943. A base camp was set up at St. Helena, in the Napa Valley, and daily trips were made to farms in the neighborhood, to gather prunes and cut grapes. The camp was a success and the venture has just been repeated in 1944, so that a report of the two years can be included in this number of the *Bulletin*.

The St. Helena community provided us with an excellent camp site on the grounds of the High School, just outside the town, where the playing field and wooded grounds in the midst of orchards allowed us to sleep outdoors, yet enjoy the luxury of constant hot water in the gymnasium showers. Commissary was set up in the open-air dining room of an auto park nearby, which is used occasionally for large religious gatherings and is equipped to serve big groups. Our living and eating were carried on in the usual pleasant style of Sierra Club camps, and though half the campers were strangers to the ways of the Club, they fitted easily and cheerfully into the coöperative routine of commissary.

The official record of the 1943 camp states that it was open 37 days from August 15; that we registered 262 people, mostly week-end workers; served 3835 meals; harvested about 450 tons of fruit; and finished with a favorable bank balance. But these figures are only the bare bones of an adventure which provided everyone concerned in camp affairs with a most memorable experience. The committee first had to feel its way through a maze of ration points, gasoline allotments, and transportation problems. Commissary was often on the point of collapse for want of a cook, and was only saved by Charlotte Mauk, Portia Bradley, and Dorothy Hill, who each in turn offered a week of their vacations to cook for us. But to balance our difficulties, we had wonderful help from volunteers among the campers. The St. Helena community did all it could to give us a pleasant time. We had a great deal of help in organizing the camp, our work, and our play, from Mr. E. H. La Franchi, Principal of the High School and member of the local Farm Labor office. We were also lucky in our Camp Supervisor, Mrs. Dorothy Lucas, Home Economics teacher at the High School, who kept our records, bought our supplies, and helped us in every way possible.

By contrast, the 1944 camp ran on the well-oiled wheels of experience. The same personnel and facilities, the same rules of food and gasoline rationing, and many of last year's campers, helped to make this camp a very happy experience. Opening on August 27 for only 22 days, we had expected to meet the peak of the harvest season, but found that cool weather

and short crops had greatly eased the demand for workers. There was no real crisis in farm labor in the valley this year, but the farmers were quick to say that they really wanted us there, ready, and, occasionally, waiting. Our figures show that 128 people worked 2316 hours; earned \$1332; and brought in 4745 boxes of prunes and grapes, 330 big baskets of teazels, and cut 34 trays of peaches. Commissary, serving almost 2000 meals, thought the campers' appetites were just as good as last year. We all enjoyed the excellent meals cooked by Carl Bowman, Tillie Smedberg, the Halliday family, and others who helped us. The use of Mrs. Wheeler's swimming pool, and a campfire on cool evenings gave us the extra pleasures of a real vacation.

The attendance was not as large as at many other camps in the State; in 1943 it was not nearly as large as we had hoped it would be; but in 1944 we were able to supply as many workers as the St. Helena Farm Labor office could place for most of the time we were there. In both seasons we did fill a great need for workers on the small and outlying farms of the St. Helena valley, and when the war is over, and we return again to vacations for fun, those of us who worked in the St. Helena camp will be glad to remember that to many of those farmers the Sierra Club is a group of people who worked very hard to help them in a time of crisis.

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SOME OBSERVATIONS ON JOHN MUIR AND GLACIAL ACTION IN THE SIERRA

BY E. C. ANDREWS

Geological Survey, Department of Mines, Sydney, Australia, 3rd May, 1944.

DR. WILLIAM E. COLBY,
Secretary of the Sierra Club,
San Francisco, California, U. S. A.

Dear Dr. Colby:

Needless to say it was with very great pleasure that I received your letter of 15th December last, calling up, as it most vividly does, so many delightful memories of all the personal kindnesses extended to me by you and Mrs. Colby at Berkeley in 1927. I often regale my wife with the account of the charming outing you gave me to the Mt. Diablo Country Club, to the summit of Mt. Diablo itself, and the delightful music which you put on for me at your home.

The signal honour which the Sierra Club has conferred on me by electing me to Honorary Life Membership is one which is particularly prized by my wife and myself. Would you be so kind as to convey to your President and Board of Directors my deep appreciation of the very friendly gesture which they have extended to me as an Australian who admires and loves America. Their courtesy and kindness has now permitted me to become intimately related to the great brotherhood of the Sierra lovers. The Sierra Nevada has always been a sort of Mecca to me, a kind of holy ground, ever since Dr. G. K. Gilbert conducted me personally through its beauty and grandeur for six to seven weeks in 1908.

Naturally I am conversant with the various articles by John Muir on glaciation in the Sierra, which appeared as reprints in the *Sierra Club Bulletin* during the period 1915-1921. Muir undoubtedly was far ahead of his time in the knowledge of the efficacy of ice action in sculpturing land forms. In fairness to Gilbert and myself, it may be stated that we were not aware at the time of his far-reaching knowledge of ice action as set forth in his papers of more than seventy years ago. Our conclusions as to the efficiency of ice as an agent of corrasion were arrived at independently. They were singularly confirmatory of Muir's excellent observations, except in one or two particulars which are mentioned lower down. In Britain, however, even as late as 1909, almost forty years after Muir's splendid public presentations of the case for glacial erosion, the idea of Ice Erosion as having any status in land sculpture was held up to ridicule and scorn. John Marr, of Cambridge, however, was a notable exception, and, in 1909, I myself heard him publicly state his conversion to belief in ice action as being the main agent in the formation of alpine facts of form.

In view of the general condition of ignorance concerning glacial action obtaining at the time that Muir made his observations, it is not too much to state that his work of glaciation and related phenomena, in the Sierra, places him in the very front rank of physiographers. He was not only a born geographer, but an explorer and a naturalist of the first order, in addition. His observations on the forms and the locations of moraines, ancient and modern; on the extensions of, and the paths taken by, the Sierran glaciers when at their maximum development; on the nature of the recessive stages of the glaciers; on the part played by morainic material in the Post-Glacial return of organic life in its fullness to the Sierra; of the association of slate and granite in the Sierra; on the existence, formerly, of a great slate roof to the intrusive granitoid batholith; on the systems of cleavage and master joints which characterize the Sierran granitoids; on the utilization of these joint systems by the glaciers in shaping the striking topographic forms of the Sierra; on the impossibility of a "fault" origin for valleys of the Yosemite type; on the grinding and polishing action of the glaciers on stoss-sides and the "plucking" action on the lee sides of rock masses such as those of Lember and Fairview domes; on the location of the Yosemite type of valley at, or immediately downstream of valley confluences and constrictions; on the formation of avalanche and earthquake scree; on the almost negligible influence of Post-Glacial stream action on the grand glacial profiles of the Yosemite Valley types; on the filling of huge rock basins, of glacial-erosion origin, by later ordinary stream action:—all these observations, together with many others, are those of one who is a master of his subject, of one who has maintained an intimate, discerning, and sympathetic acquaintance with the topographic, structural, and biological details of the great Sierran area.

An examination of Muir's statement that "all yosemites occur at the junction of two or more glacial canyons" may serve to illustrate his grasp of the principles of stream erosion (corrasion). His Yosemite types include

the valleys of the Merced-Tuolumne, Hetch Hetchy, Kings River, and San Joaquin.

The kinetic energy of a stream—whether of water, ice, or rock fragments as in an avalanche—increases as the product of the cube of the velocity and the enlargement of the cross section of the stream (occasioned by the increased volume which is producing the increased velocity). There are three directions in which this stream energy is expended; namely, straight ahead, sideways, and downward—in other words, longitudinally, laterally, and vertically—each of these directions being at right angles to the others.

All streams expend a certain proportion of their kinetic energy along each of the three perpendicular axes of resolution, and until such time as the stream is incapable of transporting its full load over any particular spot along its channel base, it will cut vertically into that channel base, that is, it will continue to deepen it. It is a fact of common observation that earth material which is being dragged across rock structures will corrade them. Especially is this erosive activity marked when the material forming the stream load is harder than the material composing the channel structures it traverses. In short, until such time, a deepening or basining action will be set up. Similarly, so long as a stream is strong enough to sweep its load as a whole alongside or against a point on its channel sides, so long will the channel tend to be widened at that point; that is, the cutting curve will be extended until the stream is unable freely to sweep its channel side at that point with steam *débris*. Similar reasoning may be extended to the case of the longitudinal or forward axis. Until the energy along this axis becomes negligible, the rock basin will continue to be lengthened as well as widened and deepened.

Muir seems to have grasped this fundamental principle of stream mechanics intuitively. He saw how the great chasm of the Yosemite commences at the confluence of the three streams—the Tenaya, the Merced, and the Illilouette—and that this stream confluence is associated lower down with a valley or channel constriction, inasmuch as the cross section of the Yosemite chasm itself is less than the sum of the cross sections of its three feeders. He noted also that the ancient ice stream—that is the glacier—occupied practically the whole of the chasm for a channel. The channel slopes of its feeders are also very steep. These facts imply both great relative velocity for the descending glacier and an increase of corrasive power in a geometrical ratio (shown above) to the acceleration of the glacier stream. A rock basin, associated with undercutting of the Yosemite Valley sides was formed thus at the confluence of the Tenaya and Merced glaciers. The comparatively weak Illilouette was undercut and hung high up above the Merced Valley floor.

A well defined Pre-Glacial canyon constriction or "narrow" occurred also at, or near, El Capitan. Just in front of this and the Cathedral Spires a rock basin was formed and enlarged by headward recession along a gently rising channel grade. During this recessional movement, lateral stream (glacial in this case) action was very pronounced with a marked amount of sapping be-

tween the 6,000 and 7,000 foot levels. Hence originated the forms known as El Capitan, the Cathedral Spires, and the hanging valley of Bridalveil Fall. Glacier Point and Yosemite Falls faced either resultant or reflected ice thrusts, and they thus became "cutting" curves. Both the Yosemite and Bridalveil falls are fine examples of the removal of the lower portions of relatively weak tributary channels possessing high grades.

As the basin, formed near Inspiration Point and El Capitan, increased in depth and length during its growth by headward recession, it joined hands, so to speak, with the rock basin which was being formed at the junction of the Tenaya and the Merced. The great Yosemite rock basin thus formed commenced a headward retreat, in turn, along the steep declivities of its several feeding stream channels. Thus was brought into being the very heavy quarrying, or plucking, operations which resulted in the formation of the profound canyon of the Tenaya and the giant "steps" over which the Merced takes its dizzy flights to form the Nevada and Vernal falls. The time factor, however, was insufficient to allow the formation of deep rock basins upstream of the area of Yosemite now occupied by meadow.

Subsequently came the decline of glaciation, and, as a consequence, the deep rock basin of the Yosemite was filled, gradually, with stream débris brought down by ordinary stream floods in Post-Glacial time.

All this is implied in the published papers of Muir.

Dr. Buwalda's conclusion, from geophysical data, that the "meadow" of the Yosemite conceals a long and very deep rock basin is borne out by all the associated topographical profiles and forms, such as the confluence of the Tenaya, Merced, and Illilouette into a channel of less cross section than the sum of the cross sections of the three feeding channels themselves, the steep falling grades of the channels of the upstream feeding valleys, and the precipitous walls which rise from the "meadow" land. Milford Sound, in New Zealand, is a homologous form, but on a somewhat grander scale. The rock basin of Milford is about five miles in length and is, at least, more than 1,500 feet deep, and is overlooked by precipitous cliffs rising as much, in places, as 5,000 to 7,000 feet above the Sound. Mitre Peak is an inaccessible wall rising 5,600 feet straight from the fiord level. Dr. Gilbert and I, in 1908, came to the conclusion that the "meadow" of Yosemite represented the filling of a rock basin which had been excavated by glaciers, but we had no means of ascertaining its depth except in a very general way. An inspection of the Tenaya Canyon, and the steps in the Merced at Nevada and Vernal falls, suggested that the floor of Yosemite might even have been a huge "tread" covered with but a few hundred feet of stream débris. On the other hand, the associated high precipitous cliffs suggested (as in the examples of New Zealand, Norway, and Alaska) the existence in the Yosemite formerly of a grand rock basin. At a general meeting of the Geological Society of America held at Berkeley in August, 1939, I drew attention to this very point, although some of the geologists present appeared unwilling to accept the idea of deep basining for the Yosemite.

Muir did ascribe somewhat too much to the action of glaciation alone in

the Sierra, and ascribed too insignificant a rôle to Pre-Glacial stream action. It is true that the Yosemite Valley types owe their present appearance to the action of glaciers; nevertheless, a study of the western, or lower, portion of the Sierra, together with that of the southern extension of the great composite range, shows that the Sierran glaciers, in their descent of the great range, simply made use of the important and well-defined Pre-Glacial valleys formed by ordinary stream action. Moreover, these well-defined valleys had been revived periodically in Pre-Glacial time by the undulatory uplifts which affected the Sierra. But Muir's fine work was limited almost entirely to the severely glaciated areas and his apparent oversight of Pre-Glacial stream work in the Sierra does not at all take away from his genius, seeing that the modifications, by the later glaciers, of the Pre-Glacial valley forms, had obliterated the signs of Pre-Glacial erosion in the vast area occupied by the valleys of the Yosemite type.

We conclude this short appreciation of Muir's work by drawing attention to another point well worthy of notice in his publications. These writings of his come really under the head of literature proper; that is to say, his scientific and philosophical opinions are couched in language worthy of permanent record as such. One example may suffice: "In the development of these (canyons) the Master Builder chose for a tool, neither the earthquake nor the lightning to rend and split asunder; neither the stormy torrent nor the eroding rain, but the tender snow flowers, noiselessly falling through unnumbered seasons, the offspring of the sun and the sea."

With kindest regards from my wife and myself to you and Mrs. Colby, and to Mr. and Mrs. Farquhar and their family, I am, cordially yours,

E. C. ANDREWS

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COMPARISON PHOTOGRAPHY
BY DANIEL H. COMPTON

While looking through the 1917 issue of the *Sierra Club Bulletin* (Vol. 10, No. 2) recently, I discovered a photograph of the Kearsarge Pinnacles (opp. p. 190) that was more than vaguely familiar. A little further on in the same issue there was a picture of Lyell and Maclure from the summit of Mount Florence (opp. p. 231) which I thought I had taken in 1943, but which turned out to have been taken in 1916. I promptly started digging through my file of Kodachrome slides, and, sure enough, there was a Kearsarge Lake scene dated July 13, 1939 with the same tree and everything. And even more startling, the two shots of Lyell and Maclure seemed like identical twins.

The most interesting feature of the Kearsarge pictures is the foreground trees. Most travellers of the High Sierra can recall speculating on the rate of growth and the durability of these veterans of many winters. In the same 1917 *Bulletin* there appears an article by Walter Mulford, "The War-Zone Forest of the Kern," which raises the question of how long some of these battle-scarred trees can hold out. A comparison of the two pictures,

taken about twenty-three years apart, suggests that they are durable indeed. The foreground tree is a bit the worse for wear but still going strong, while most of those in the background have grown nicely. Surprisingly enough, two out of three dead trunks in the background are still almost unchanged.

Any noticeable change in the granite High Sierra over so "short" a period as twenty-seven years would be an occasion for visits by famous geologists. Interest in the two pictures taken from Mount Florence, therefore, relates to their similarity. At first glance the snow banks seem almost identical, and a more careful checkup confirms this opinion. Even the position of the loose boulders in the foreground and the lichens on the rock left of center seem unchanged by the passing years.

The interesting comparisons afforded by these unpremeditated duplicate photographs suggest that planned shots would prove of real interest and that in some cases valuable information might be brought to light. Here is an opportunity for Sierra Club members who are photographers to have a good time perusing old *Bulletins* in the spring, taking comparison shots in the summer, and entertaining their friends and fellows in the autumn.

Book Reviews

TOWARDS APPRECIATION OF NATURE¹

Dr. Merriam is eager to deepen our appreciation of nature. This stimulating little book suggests many ways towards that end. Scientific knowledge of nature broadens; the beauty of nature delights; its sublimity and power touch the springs of life and hint the mystery which gives the title to the book.

The thought develops quickly. A view of the world as science reveals it is followed by some charming sketches of the "inspirational influence" of certain well known places. The beeches of Adams Mill Road in Washington, and the Lake Region of England, contrast in their familiar intimacy with the magnitude of the Grand Canyon, Crater Lake, and the California redwoods.

A discussion of the influence of primitive nature and of what nature may do for us day-by-day leads to the suggestion—novel to many people—that appreciation of nature may be used to strengthen the ties of friendship and understanding among the peoples of the earth. A final chapter touching religion and the order and dependability of nature interprets the title of the book: on the assumption, which the book accepts, that there is a God, "Nature would be in a measure the living mantle of God."

EDWARD L. PARSONS.

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THE SOUTHERN APPALACHIANS²

The Great Smokies and the Blue Ridge seem a natural choice for the subject of the second volume in the *American Mountain Series*, following the volume on "The Friendly Mountains" of the Northeast. Roderick Peattie again does the editing, bringing together contributions of various authors in a comprehensive story of the Southern Appalachians, "the mountains that fit into the scheme of life like a good and understanding friend."

The story opens with a chapter on Indian days and the coming of the white man. This is followed by an extremely interesting chapter on the mountain people, people whose determination to find freedom led them into the mountain wilderness where they became practically isolated for a century and a half. The author writes of these people with an honesty, understanding, and sympathy, and an eye open for the humorous touch, that is most satisfying. Succeeding chapters deal with folk music of the region and the mountain crafts. Special attention is given to the forests, which clothe the entire range and include 140 species of trees, among them a large proportion of flowering trees. The chapter on the wildflowers includes the exciting story of Shortia, the lost flower, and speaks of the unusual fragrance of the Blue Ridge. Sec-

¹*The Garment of God*. By John C. Merriam. Charles Scribner's Sons, New York. 1943. vii+162 pages, illustrated. Price, \$2.00.

²*The Great Smokies and the Blue Ridge*. Edited by Roderick Peattie. The Vanguard Press, New York. 1943. X+372 pages, 29 photographs. Price, \$3.75.

tions on geology and climate round out the story. In conclusion, we are taken through a year in the Great Smokies National Park, month by month, and learn how to plan a trip there.

We see that these Southern Appalachians offer real adventure, whether one drives or walks through them, hunts and fishes, or sits and looks. And what if they are not as high as some? As a mountain woman said, "even a little height makes a sight of difference in the way a body sees things." B. S.

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**VOCABULARY BUILDER
PAR EXCELLENCE¹**

Geomorphology, the science of earth forms, is the branch of geology that should have the widest popular appeal since it, more particularly than any other, helps us to interpret whatever we see of the earth. Whether a scene presents the inspiring grandeur of a Yosemite or the quiet beauty of a broad valley, the detailed carving of a desert canyon or the vast monotony of a lava plateau, the capacity to appreciate if not to enjoy what is seen is greatly increased by an ability to interpret the geology behind the particular land form. Prof. Von Engel's book, however, is not designed to interest the amateur or the beginner and lead him into the subject, but is purposely an advanced study designed for those who have already had elementary training in the geological sciences. To such students it presents the fascinating study of the origin, growth, and senescence of various features of the landscape in interesting description and concise detail, illustrated with numerous pictures, diagrams, and maps. The text is documented with abundant bibliographic references and each chapter is closed by a selected list of technical and specialized works and papers dealing further with the subject just presented.

Since the science of geomorphology has had its chief development in the United States, it is natural that most of the book concerns the American landscape, and it should be of special interest to Californians and members of the Sierra Club that numerous geologic features of western America are discussed in detail. In Chapter 17, "Fault-block Mountains and Topography Resulting from Faulting," an entire section is devoted to the Sierra Nevada, "probably the largest unit fault block in the world, both with regard to areal dimensions... and to altitude..." In Chapter 14 on "Rock Weathering," Shiprock, of rock-climbers' fame, is described as a "volcanic butte" and is strikingly illustrated by a Spence Air Photo. "Waterfall Sites" offers attractive matter, both descriptive and pictorial, in Chapter 10; and Chapter 19 on "The Glacial Geomorphic Cycle" should be especially interesting both to mountaineers and glaciologists; although, as indicated in the chapter foreword, the material is presented in a matter-of-fact way even when it concerns debatable details "of the many fascinating problems of glaciology."

Every phase of the subject introduces its own special nomenclature. The numerous terms are clearly defined in the text, and from the well-prepared and detailed index they may be quickly located for reference. The large num-

¹*Geomorphology, Systematic and Regional.* By O. D. von Engel. The Macmillan Co., New York. 1942. xxii+655 pages, 7 plates and 372 figures. Price, \$4.50.

ber of technical terms employed may be discouraging to the non-geologist, but, in this connection, we are reminded of the plea of Seward, the eminent English paleophytologist, that "some of the technical terms in common use by geologists should find a place in the vocabulary of all educated people."

JOHN THOMAS HOWELL.

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FLORA OF THE
PACIFIC STATES⁴

Everyone interested in native plants, whether from the point of view of amateur flower-lover or professional botanist, is also interested in those systematic accounts of the vegetation of a given region which we call floras. For all botanists, whether amateur, economic, or professional, the publication of Volume II of Abrams' *Flora* is a botanical event of first magnitude, one that has been awaited with keen anticipation ever since the publication of Volume I in 1923. The waiting is richly rewarded with a work that will prove as useful and as helpful as the earlier volume.

This new volume covers thirty-six families, from the buckwheats to the kramerias. Each of the 1663 species that are analyzed in the keys is illustrated by a line drawing that depicts the characteristic aspect of the plant as well as important details of floral structure; and each species is given a common name. Extended synonymy is included for many species, and for all scientific names the bibliographic reference is added. Following the technical description of the plant, there is a brief statement telling the ecological and geographical distribution of the species, the time of flowering, and the type locality—namely, the place from which the plant was first described.

All this contributes to the value of this work for the botanist in search of concise data about a given species. The illustrations are not only useful to the professional botanist, but are invaluable to the amateur; the distributional data are an important help to students of plant geography; and the economic botanist, whether interested in forestry, range management, weed control, or horticulture, will find here a fund of information. As the title implies, the work covers the states of Washington, Oregon, and California. It is the only flora that deals with the entire Klamath-Siskiyou province of northwestern California and southwestern Oregon, a critical bio-geographic region to which many remarkable plants are restricted. Before this, floristic treatments have been chiefly concerned with the plants either north or south of the Oregon-California line, and as a result the same plant in this area has sometimes had two names, one for Oregon and another for California.

Most of the work in this volume has been done by Dr. Abrams, but the treatments of a few of the families and genera have been prepared by his students or by specialists: *Nyctaginaceae*, *Portulacaceae*, and *Descurainia* by Roxana Stinchfield Ferris; *Ranunculus* by Lyman Benson; *Saxifragaceae* (except *Heuchera*) by Rimo Bacigalupi; *Lupinus* by Charles Piper Smith; *Grossulariaceae* with the assistance of Frederick V. Coville.

⁴*Illustrated Flora of the Pacific States*, Volume II. By LeRoy Abrams. Stanford University Press. 1944. viii+635 pages, illustrated with 1663 figures. Price, \$7.50.

For over forty years Dr. Abrams has been studying western plants, not as static things merely to be catalogued, but as dynamic living organisms, responsive to surroundings, sensitive to change. This volume shows the fruit of this rich and ample experience and we trust that before long we shall have the third and fourth volumes of this valuable contribution to western botany.

JOHN THOMAS HOWELL.

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**MOUNT DIABLO
BOTANY¹**

The distribution of plants in all parts of California shows the effect of the geologic unrest that has affected the Pacific Coast of North America from the middle part of the Tertiary until the present. With the origin of a new topography floristic rearrangements took place, new plants took over the modified terrain, and old plants became restricted to favorable habitats that were frequently highly localized. Because the Coast Range area in California has been involved in an especially complicated series of geologic changes, the flora is correspondingly complicated, not only in floristic relations to other parts of California and the Pacific Coast but also within itself. The problem is much too complex to be solved at the present time even though much critical information has been assembled concerning both fossil and living plants. The final estimate of the Coast Range flora will come only when abundant data are available after detailed studies of living plants have been made in a number of critical regions. Dr. Bowerman's book on the flora of Mount Diablo is primarily and uniquely important as the first published work that treats the modern flora of a restricted part of the California Coast Ranges in extended scientific detail, and it may well be regarded the first of those detailed studies from the integration of which the entire flora of the Coast Ranges may eventually be interpreted and evaluated.

In the introductory parts of the work, Dr. Bowerman has assembled numerous pertinent data from other scientific fields that bear directly on the plants of Mount Diablo; she describes in detail the different plant formations and their distribution on the mountain; and she gives a particularly critical analysis of the flora, discussing its relationship to the flora in other parts of the Coast Ranges and California. Although I believe that these data constitute the important scientific contribution in the work, the most immediately useful and popularly attractive part of the book will undoubtedly be the catalogue of 630 species of vascular plants now known from Mount Diablo. For the identification of the plants, clear and relatively simple keys have been prepared which can be used with ease. The book is unusually well printed and is particularly attractive with its sturdy gold-engraved covers. Every visitor to Mount Diablo who is interested in the natural history of this splendid mountain will find Dr. Bowerman's book a real need, while botanists should find this work a model and inspiration for further Coast Range studies.

JOHN THOMAS HOWELL.

¹*The Flowering Plants and Ferns of Mount Diablo, California.* By Mary L. Bowerman. The Gillick Press, Berkeley. 1944. xi+290 pages, illustrated. Price \$3.75.

MEETING THE MAMMALS* This book is a highly readable account of the habitats, life histories, and distinguishing characteristics of certain interesting mammals of the western part of the United States. Sixty-six mammals are described. Their homes range from the arid regions of the Southwestern Monuments to the rainy western slopes of Olympic National Park, and from Yellowstone National Park to Death Valley National Monument—regions with the extremes of heat and cold to be found in the United States. This authoritative book has been written by Victor H. Cahalane, who is in charge of the Section on National Park Wildlife, U. S. Fish and Wildlife Service. It is illustrated with unforgettable pen-and-ink drawings of each animal by Walter A. Weber, the well-known animal illustrator. It is designed to serve as a field guide for visitors in our western national parks and monuments, where mammals live undisturbed by hunting and trapping, and it furnishes a ready answer to the question, "What animal is that?" Under the name of each park and monument are listed the mammals to be found there, together with the name of the lake, stream, meadow, or other locality where each species can best be observed. RUTH ELWONGER.

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COOKING OUTDOORS* This book will be most useful to the base camper, the auto camper, the animal packer, the canoeist, and the summer cabin-dweller—those who are likely to regard cooking and eating in camp as ends in themselves or among the main activities of the trip. It covers some of the requirements of the rugged mountaineer or knapsacker, who must split ounces and who looks upon grub as fuel with which periodically to stoke his internal engine, but it is not designed primarily as a concise or complete manual for him. This is not to say that the author advocates any silly luxuries, such as crates of fresh cantaloupe; rather, he leans toward a sensible compromise between luxury and feather-weight simplicity, preferring to take an extra pack animal, though not an extra string of animals, for the sake of providing an interesting camp cuisine.

There is room, as always, for much argument as to whether this or that piece of equipment, recipe, or method set forth in the book is an ideal one; but the author is not one of the old codgers who swears dogmatically by pet ideas—he offers a choice of ideas and allows the reader to exercise judgment of his own. Several typical grub lists are offered. The author prefers to plan by the given-number-of-breakfasts-lunches-and-dinners method (setting up tentative menus for each day), but gives us a number of pounds-per-man-day lists as well. There is information on fires, equipment, and care of wild meats. There are several well-stocked chapters of recipes, including recipes for fresh and cured meat, game and fish, fresh and dehydrated fruits and vegetables, fresh and dehydrated eggs, breads, desserts, etc., and all the typical outdoor mulligans, slumgullions, and other conglomerations. Some of the

**Meeting the Mammals*. By Victor H. Cahalane. The Macmillan Company, New York. 1943. 133 pages, illustrated. Price, \$1.75.

**The Outdoorsman's Cookbook*. By Arthur H. Carhart. The Macmillan Company, New York. 1944. 1-211 pages, illustrated with line drawings. Price, \$1.95.

names, such as Hopping John, Majporkolt, and Spotted Dog (which somewhat disappointingly turns out to be rice pudding) add seasoning even to the printed page. The whole is topped off with a few extras such as recipes for waterproof glue and mosquito dope.

My only general adverse criticism of the book might be that it is somewhat wordy. Nevertheless, it strikes me as a useful manual for the general camper, and a very good source of ideas for those who like to amuse themselves with all sorts of plain and fancy camp cookery. LOUISE H. KLEIN.

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**A MANUAL FOR USE
IN WILD COUNTRY^a**

The authors of this manual, two zoology professors at the University of Michigan, have had extensive experience with the problems encountered by men who are on their own in unfamiliar country. Their book gives a summary of information designed to prepare the soldier, sportsman, or field man with knowledge he would normally gain only after considerable research and experience in protection against the common physical discomforts and dangers associated with living in wild country.

Advice presented in the manual inspires confidence, not only for its accuracy and pertinence, but because a thoughtful effort has been made to minimize dogmatic rules and to encourage individual thought and initiative. It is addressed to the inexperienced individual who is called upon to supply strictly his own needs, and no attempt is made to cover planning and organization of trips or the more advanced phases of mountaineering which involve specialized equipment and unusual terrain.

The Red Cross courses in first aid and swimming are recommended, and mention is made of the "second aid" methods often required in remote areas. Organization of the subject is exemplified by Section One, which describes with good emphasis and brevity the precautions advisable in (a) intense sunlight, (b) high temperatures, (c) low temperatures, and (d) storms and exposure. Other sections cover methods of protection against dangerous or annoying animals, and insects and poisonous plants. Sections on food describe commercially available supplies and edible wild plants and animals. Considerable attention is given to avoidance of dangerous diseases which exist uncontrolled in many areas of the world. The manual keeps away from quack remedies and questionable practices. It has withstood the scrutiny of appropriate scientific departments at Michigan. Although a worthy effort was made to present a wide scope it is evident that the authors were most familiar with the central area of North America. A good deal of the information on plants and animals is specific in this area and has little value as a basis for specific action in other parts of the world.

Appeal is to the self-reliant individual who wishes to inform himself of the factors to be considered in living in wild country. Since the entire book is concerned with problems involving discomfort or danger, the casual reader

^a*On Your Own. How To Take Care of Yourself in Wild Country. A Manual for Field and Service Men.* By Samuel A. Graham and Earl C. O'Roke. University of Minnesota Press, Minneapolis. 1943. 150 pages, illustrated. Price, \$2.00.

might well be alarmed by the apparent heap of trouble he is inviting when he walks past the city limits.

RICHARD H. FELTER.

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A HIKER'S HANDBOOK⁹ This is just what it purports to be. Although it is written for novices (and walkers, not mountain climbers), there are many suggestions in it which could be adopted even by seasoned veteran hikers. As in any book of this sort, there are matters of controversy upon which no two hikers agree—the pattern of one's hobnails for example—but as a practical manual “for those who make a hobby of walking” it seems to cover the essential items and answer the essential questions in a helpful and pleasant way.

The author, who is on the staff of the National Museum of Canada should know his subject, as he has hiked in many parts of the world under many different conditions.

H. T. P.

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PIONEER AMERICAN CLIMBERS IN THE ALPS¹⁰

Dr. Thorington is the foremost American antiquarian of the Alps. His inquiries have led him into fields overlooked by Europeans, with results far more voluminous than anyone save perhaps himself supposed possible. He has brought together from many sources accounts and records of climbs made by Americans in the Alps, from a crossing of Mont Cenis Pass in 1763 to climbs at the end of the Nineteenth Century. Of greatest importance, perhaps, is the contribution made by Dr. Thorington to the history of Mont Blanc and the part played by Americans in the development of mountaineering interest. But, for the general reader, the book contains many a surprise in the names of the climbers. One has to pause and remember that men who have achieved pre-eminence in other fields than mountaineering were once young and full of steam. For here we meet such celebrities as Justice Oliver Wendell Holmes, S. F. B. Morse, David Starr Jordan, Theodore Roosevelt, Henry L. Stimson. Greatest of all American climbers was the Rev. W. A. B. Coolidge, who, to be sure, lived most of his life in England and on the Continent, but whose New York aunt, Miss Brevoort, introduced him to the Alps.

F. P. F.

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A PHILOSOPHER OF THE HILLS¹¹

This unusual little book tells, in a series of impressions and informally connected essays, of the escape of a man—an imaginary Charles Allen—from a skyscraper in the city to a cabin in the Sierran foothills. These impressions cover a wide range of descriptions and philosophizings on nature's laws, eugenics, man's laws,

⁹*The Hiker's Handbook*. By Douglas Leechman. W. W. Norton and Co., New York. 1944. 1+220 pages, illustrated with 39 figures. Price, \$2.50.

¹⁰*A Survey of Early American Ascents in the Alps in the Nineteenth Century*. By J. Monroe Thorington. The American Alpine Club, New York. 1943. vii+83 pages, illustrations. Price, \$2.00.

¹¹*Sierran Cabin . . . from Skyscraper*. A Tale of the Sierran Piedmont. By C. M. Goethe. Printed by the Keystone Press, Sacramento and San Francisco. 1943. vi+185 pages, illustrations. Price, \$1.25.

people of the foothills, the animals and wild flowers. It is illustrated by many instructive photographs.

The author has been a member of the Sierra Club for many years and has made many effective contributions to the causes for which he speaks in this book.

H. T. P.

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**TAMALPAIS
IN FLOWER¹³**

These intimate comments on the living mantle of Mount Tamalpais originally appeared in *Out of Doors*, the publication of the Tamalpais Conservation Club, from 1914 to 1938, so have doubtless been read by many Sierra Club members. Now they are available as a permanent collection and for a wider audience. Do you wish to know about how plants grow on Mount Tamalpais? or, about the flowers of winter or fall? or, about madroña, or manzanita, or ceanothus, or about the Rose Family which includes wild cherries and strawberries? You are fortunate to have Miss Alice for a guide.

F. P. F.

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**HOW MOUNTAINS
ARE MADE¹⁴**

Written primarily for younger readers, this book is a clear and interesting account of how our mountains evolved; a book which should be of value also to many adult readers who feel the need of an elementary but readable history of mountain building.

The authors take us all over the United States to show us the different kinds of mountains and to explain how they developed. Blister mountains, volcanoes, hills derived from ancient seas, glaciers, prehistoric animals and plants, and those found living on the mountains now, are all described. The book is full of appropriate and attractive photographs and illustrative drawings.

H. T. P.

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**A GOOD BOOK
SPOILED¹⁵**

While we are speaking of educational books about mountains, I should like to sound a note of protest against the dissemination of inaccurate and lopsided information. A little while ago I bought a very attractive little book about mountains thinking that I had found something well-suited to stir the interest of children in this subject. The format is excellent, the maps and illustrations are well adapted to the purpose, and the text is just what I wanted, with two notable exceptions—it is full of inaccuracies, and there are several major omissions. The obvious explanation of the inaccuracies is that the author has used obsolete secondary sources; the explanation of the omissions, that the author doesn't know very much about geography. Without entering a complete bill of particulars, I

¹³ *A Collection of Popular Articles on the Flora of Mount Tamalpais*. By Alice Eastwood. Published by the Author, California Academy of Sciences, Golden Gate Park, San Francisco. 1944. 32 pages. Price, 50 cents.

¹⁴ *Mountains*. By Carroll Lane Fenton and Mildred Adams Fenton. Doubleday, Doran and Co., Garden City, N. Y. 1942. v+160 pages, illustrations. Price, \$2.50.

¹⁵ *Mountains of the World. Stories and Pictures of the Great Mountain Ranges of the World*. By F. Raymond Elms. Albert Whitman & Company, Chicago. 1941. 80 pages, illustrated. Price, \$2.00.

cite only the following: Mont Blanc is not the highest mountain of Europe—Elbruz is; Paccard, not Balmat, should be credited with the first ascent of Mont Blanc, at least he should be mentioned; Karstens should have similar precedence over Stuck on Mt. McKinley; the altitude of Mt. Whitney should be given as 14,495, or in round figures, 14,500 feet, not 14,501; none of the main passes over the Sierra Nevada is over 12,000 feet; the region of the Andes is not the only place where the equator passes through ice and snow—Africa is another such region, and New Guinea almost qualifies. The omissions are more important: no mention of the Coast Ranges of British Columbia and Alaska (St. Elias and Logan, for instance); nor of Mount Rainier, Shasta, and the Tetons; Etna is there, but not my classical friend Olympus; the vast mountains of Africa (Ruwenzori, Kilimanjaro, Kenya) are not mentioned; and there is no word of the Caucasus, nor of the great peaks of New Zealand. But even if all these errors and omissions were corrected, I should have to keep this book from my children, for on nearly half the number of pages it is smeared with the expression "Sierra Nevada Mountains"—and any child of mine is bound to know that "sierra" means "mountains" and we don't like double-talk.

The purpose of this review is to plead for greater care in presenting geographical and historical subjects, especially to children.

F. P. F.

SIERRA CLUB

Founded 1892

MILLS TOWER, SAN FRANCISCO, CALIFORNIA

THE PURPOSES OF THE CLUB ARE: *To explore, enjoy, and render accessible the mountain regions of the Pacific Coast; to publish authentic information concerning them; to enlist the support and coöperation of the people and the Government in preserving the forests and other natural features of the Sierra Nevada*

JOHN MUIR, President 1892 to 1914

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